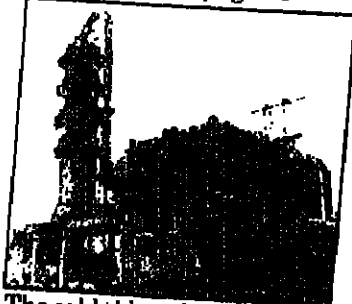
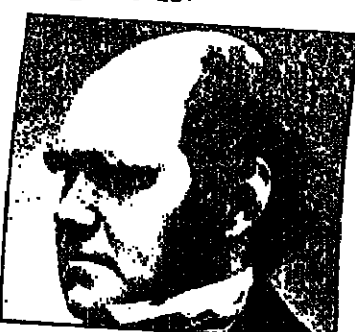


Peter Aspdon meets Sir CLAUD MOSER, chancellor of Keele University, Warden of Wadham College, and the man responsible in the 1960s for the mathematical foundation of academic expansionism (page 11)



The cold tides of economic recession have changed Britain's industrial outline. In the first of a two-part feature, Philip Cooke examines the restructuring of the REGIONAL ECONOMIES and the changing nature of local employment (page 13)



As the CROHAM committee ponders the future of the UGC, nine distinguished insiders and outsiders offer their views on the proper relationship between universities and the state (pages 14-15)

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Britain's industrial future: part two
Continuing education: state of the parties
J.R. Watson on the idea of Paradise



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The reform of the UGC

The future of the University Grants Committee is a great question. The nature of the UGC both determines and reflects the character of the relationship between the universities and the state. However, as the Croham committee, which is reviewing the work of the UGC, has become in the details of the committee's operation, its members cannot afford to forget the larger significance of their inquiry. However, as the Croham committee, which is reviewing the work of the UGC, has become in the details of the committee's operation, its members cannot afford to forget the larger significance of their inquiry.



In another perspective, one from which many instinctively shrink, Croham is an exercise in revising the relationship between universities and the state - if not by deliberate design then by the accumulation of detailed reforms. For the character of the present UGC - its clubbishness, its confidentiality, its inwardness - reflects the principle that governments do not get involved in detailed policy-making for and management of universities but leave both to be determined by a grand jury of the academic great and good. This arm's length relationship between universities and the state, so much admired in other countries, reflects in turn the assumption that university development should be guided primarily by academic criteria with political demands playing a supporting role.

This assumption can no longer be reasonably made. Today university policy is clearly determined by political criteria with academic considerations in the supporting role. This has been true since Robbins and before, but after 1981 the subordination of academic to political purposes became blatant and probably irreversible. So undetermined and the character of the UGC, which is built on this principle, has become an anachronism. The inescapable conclusion for Croham is that the UGC must be reformed.

The majority instinct in universities acknowledge this great reversal in their relationship with the state as reluctantly, infrequently and inconspicuously as possible in the hope pre-empting any reform of the UGC. Least said is soonest mended seems the dominant attitude. Nothing could help those who desire the final political subordination of the universities more than for the latter to pretend that the principles underlying to state-university relations do not need to be discussed.

On the contrary, the universities have everything to gain from such a discussion even if it leads to a root-and-branch reform of the UGC. For it is the reasonable independence of the universities, not the institution of the latter, that must be protected. The more to achieve the former purpose, the more to achieve the latter purpose, the more to achieve the former purpose, the more to achieve the latter purpose.

but perhaps less than the actual power informally exercised by government. This is the great question that must inform the discussions within the Croham committee on the little questions. Not that the latter are really little, but they do need to be related within a larger framework of assumptions about universities and the state. Those assumptions will be there in any case, but it is better for them to be recognised explicitly than implicitly in the committee's deliberations. Nor will everyone agree about what that already be enough common ground on which to build a reformed UGC.



Certainly many people believe that the UGC must become more political and less donnish, because the decisions it will face will be as much political as academic, because the rival National Advisory Body is a political animal and because it will need to play politics as forcefully to fight for the universities at Westminster and in Whitehall. They also believe the UGC should be more open in its sponsorship of university interests, because its private advice to ministers seems to lack authority, or at any rate persuasion, while the UGC's peculiar status in-

officers were preferred to local politicians. Now the former are more likely to be regarded as the chairman's placement, drafted in to staff subcommittees, and the latter as right-wing businessmen! Unfair maybe, but too widely believed to be ignored.

Instead of the present academic majority there should be parity between academic and lay members on the UGC. The committee should be given a full-time deputy chairman, who would be a lay person if, as would be probable, the chairman was an academic or vice versa. Lay members should still be appointed, but from a much wider constituency than the business community and other parts of education and with longer terms to reinforce their political independence (a practice followed in the appointment of the regents of some American universities). Academic members should also continue to be appointed, but after a process of open nomination, by universities, subject associations, trade unions and other organisations.

Fourth, the operation of the UGC must be reformed. At present members have to do a lot of the routine work, the secretariat is confined to a passive servicing role, and great reliance is placed on the subcommittees. As a result members are oppressed by detail, policy initiatives tend to come from the chairman, and the subcommittees often act as disciplinary cartels. Instead the secretariat should be encouraged to take a more prominent part in policy making and should be granted greater administrative discretion - which would relieve the work of the chairman (and the DES?), and curb the independence of the subcommittees because academic expertise should be on tap not on top. Of course a very different secretariat would be needed to take on such an expanded role. It would not be enough to staff the UGC with university administrators trained in deference to their academic masters; instead people with both administrative panache and academic credibility would be needed.

The UGC under such a reformed regime would have to be more open. It would have to share its policy thoughts with both the Government and the universities. Here a clear distinction consultative publicity, as practised irregularly and painfully by the NAB, FM inspectors (and soon by the UGC itself) to reinforce its strategy of research activity.

The constitution, membership, working structure and secretariat of the UGC are the core of Croham. But there are other issues almost as important as the committee's relationship with the NAB and the funding of the Scottish universities. On the first attitude but on the second it should take a permissive line. Nothing sensible planning of higher education so long as the UGC-NAB dichotomy persists, but the position is more open and hopeful in Scotland.

The reform of the UGC is a delicate question, not because the committee in its present form is loved or even respected but because the UGC system stands as proxy or guarantor for those qualities of British universities that are so highly valued - their excellence in scholarship and research, their institutional integrity, their collegiality, their commitment to liberal education. None of these is British. So people argue that to tamper with the UGC is to jeopardize those much loved qualities. This is a false argument. A two-tier UGC, while preserving its old donnish character so attractive, larger lay voice seem way round. Precisely because these qualities must be defended, the root-and-branch reform of the UGC must be contemplated. A strong and more modern UGC would act as more effective guarantor, a more honest

Laurie Taylor



CALL PROFESSOR LAPPING
CALL PROFESSOR LAPPING

Ah, Professor Lapping, pleased to tell you that the Day of Action Appeals Committee has now concluded its deliberations on your case. We've carefully considered your claim that you were fact working on the campus for 12 Saturdays and 12 Sundays during the last academic year, but as it is only partly supported by independent evidence we are not able to recommend that your total salary deduction for the Day of Action should be reduced from 1/260 - the figure based on the total working year minus weekends. Have you anything to say?

The Struggle Continues
Quite so. Now, might we have the next appellant?

CALL DOCTOR PIERCE-MULLER!
CALL DOCTOR PIERCE-MULLER!

Ah, Doctor Piercemuller, I should first of all say that the committee was most interested in your claim that although you were technically absent from the university on the Day of Action, you were not absent for political reasons but because you were unaware that term had started, and that, therefore, no deduction at all should be made from your salary.

That's right, Vice Chancellor. Well, Doctor Piercemuller, I'm afraid that the committee felt that your uncertainty about the opening date of term was less than satisfactory in that term had already been under way for a week before the Day of Action. I was, however, asked by the committee to say that they considered your story "a good try". Have you anything to say?

We Shall Not Be Moved
Exactly. Next please

CALL DOCTOR QUINTOCK!
CALL DOCTOR QUINTOCK!

Now, Doctor Quintock, your claim is that, although absent from the university, you were carrying out research during the afternoon of the Day of Action and therefore the appropriate deduction in your case should be one half, that is not 1/260 but 1/520?

Yes, Vice Chancellor. And I would also like to claim for a weekend which I worked back in November. Quite so. Well, we've gone into your argument carefully but find it difficult to support when there is good evidence to suggest that you spent the afternoon of the Day of Action at ABC 2 watching Pumping Iron - The Women. Have you anything to say?

Unite and Fight!
Yes indeed. And Doctor Quintock, one other thing. On your way out would you be so good as to close the door of the appellant's room. That constant singing of The Red Flag can be a little trying.

by Nigel Croucher

The Government has dropped the clause from next year's legislative programme, effectively killing the proposed bill.

A Cabinet subcommittee examining items for inclusion in the November Queen's Speech - when the Government lays out its proposals for legislation - has ruled that a bill to limit the power of academics is not a priority, and there is no room for it.

Although it would be possible to reintroduce the issue the following year, it is agreed that, in the meantime, no action should be taken. The decision is another embarrassing setback for the Government, following the retreat over student unionism. Mrs Thatcher was extremely keen to see the bill through.

The issue was first raised by the Government in 1982. There then followed a period of consultation with the universities and last December proposals were published which would have given universities power to dismiss academics because of redundancy or for financial reasons.

Mr Maurice Shock, chairman of the Committee of Vice-Chancellors and Principals said: "We have always thought that tenure is irrelevant. We have no practical significance of any kind for the problems which universities are going to face over the next three years."

Ms Diana Warwick, general secretary of the Association of University Teachers said: "The proposals were bound to cause terrible controversy, particularly with their impact on academic freedom. We would have done nothing to solve the problems of universities face."

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V-Cs alarmed by UGC's strategy

by Peter Aspdon and Karen Gold

Relations between the University Grants Committee and the universities are deteriorating rapidly as doubts grow about the committee's new strategy which will be unveiled in May. Last week's meeting of the Committee of Vice-Chancellors and Principals was dominated by increasing alarm about the financial plight of many universities and the danger that the UGC's strategy may exacerbate these mounting difficulties.

At a weekend conference a UGC member revealed first details of the planned rationalization of modern languages, which is likely to provoke the first of the many controversies that will erupt when the committee's full plans are made public.

Among the vice chancellors there are four areas of acute concern:

● By separating teaching, to be funded by formula, from research, to be funded selectively to underpin academic excellence, the UGC has abandoned its traditional job of assessing universities as whole institutions.

● By relying too heavily on the research community in devising its selective strategy the UGC will make it almost impossible for universities to back their own research bets.

● They suspect that the Department of Education and Science has not been convinced by the UGC that

universities now face a financial crisis as threatening as that triggered off by the 1981 cuts;

● They are hopelessly divided about whether the UGC should publish full details of how university allocations have been devised, or whether universities should be offered minimum guidance.

One of them said: "We want to know exactly where we stand - but if the news is bad, we would rather not hear about it in full detail. We are totally schizophrenic about the whole exercise."

The vice chancellors' scepticism reflects the severity of their present financial plight. They are faced with an annual 2 per cent funding cut, and a 5.4 per cent increase on their salary bill.

Many of them admit that if the UGC gives full details of further cuts in research funding in May - these will not exceed 1.5 per cent in the first year - they will face an even bigger crisis.

At the meeting there were calls for the UGC to go back to the DES and emphasise the problems affecting universities.

"It is a moment of truth - either they go back and convince the Government that there really is a resource crisis, or they go ahead and start talking about closing some universities completely. It cannot go on like this," one vice chancellor said.

Meanwhile Professor Martin Harris from Salford University and a member of the UGC revealed that

the committee planned far-reaching rationalization of Scandinavian studies and Italian. French and German would be left "to look after themselves", while plans for Spanish and Russian were still incomplete.

The proposals for modern Greek - to keep the existing four departments - and for Scandinavian studies - to go from four to five departments, with negotiations already under way between the UGC and the university involved were to protect "minority" modern language provision.

Staff in small Italian departments which would close have already been informed and in almost every case are signed up to move to other universities with larger departments, Professor Harris said.

A similar exercise has begun in Dutch, but will not meet the May deadline, he said. In Spanish there had been less collaboration and no nationally agreed plan existed. The UGC had to decide in the next few weeks whether to create its own plan or to leave future Spanish provision to the decisions of individual universities.

The UGC could not allow departments of fewer than three staff teaching joint honours or five teaching single honours to continue, because the staff did so much teaching they had no time for research, he said.

Leader, back page



Man overboard... the reserve crew of Cambridge University's Boat Club celebrated their victory at Henley on Sunday by ducking the only male crew member, cox Adrian Hynce. Though the Cambridge reserve crew were successful, triumph in the official boat race between the top two women's teams went to Oxford.

Poly board rejects Keele merger terms

The academic board of North Staffordshire Polytechnic has quashed plans to merge the polytechnic with Keele University on the terms proposed by last year's working party report.

It is recommending to the polytechnic's governing body that no further discussion on the merger goes ahead on the grounds that the polytechnic would lose its identity under the present terms of merger.

The polytechnic's director, Dr Frank Dickenson, said much of the criticism of the working party report, released last November, centred on dangers that any merged institution

would simply be an enlarged university.

"Colleagues in the polytechnic have every right to be proud of its past achievements and current standing as a large regional and national higher education institution. They have no interest in simply becoming a university if that means abandoning those distinct qualities that polytechnics represent," he said.

The working party, which consisted of leading figures of both institutions, including Dr Dickenson, recommended the creation of a new University of Staffordshire which would be

funded through the University Grants Committee.

Dr Dickenson said there was still much uncertainty over the precise funding arrangements of the new institution, however, as well as the question marks hanging over planning exercises being carried out by the UGC and the National Advisory Body.

He said the polytechnic was in favour of further collaboration and recognized the possibility that this might eventually lead to some merger, but there had been a firm rejection of the working party report.

DHSS unhappy at withdrawal of social work protection

by John O'Leary and Patricia Santinelli

Social work courses in polytechnics and colleges are under threat following a decision by the National Advisory Body not to give them protected status.

The decision to give social work "priority status" was confirmed by a letter from Mr John Berman, NAB secretary, to a number of pressure groups whose subjects included social and administrative studies, computing, government, public administration, law, sociology and other social studies - are in line for a 17

per cent cut.

NAB's decision runs contrary to one of the recommendations which have emerged this week from the Heidi Koseda inquiry - the child who was starved to death - which says there should be more and better social work training.

The cuts which could mean the loss of around 350 social work places are being left up to individual polytechnics and colleges and Mr Berman has advised the pressure groups to monitor the process and to lobby the government.

His letter explains the reasons behind the board and committee's decision not to differentiate between

subjects within the three categories. Both bodies were sympathetic to the claim of vocational subjects caught in the least in the caring profession, but it was felt impractical to single out some at this stage.

However the board and the committee have not ruled out some extra protection for such subjects at a later stage if they are taking too big a share of the cuts, or if more money is forthcoming.

A secretariat paper on programme balance acknowledged the case for special treatment for some subjects, naming social work as "the most prominent recent example" and also law.

The Department of Health and Social Security was not planning a statement this week, but it is known to be unhappy about the cuts in social work. In the last planning exercise, the department tried unsuccessfully to raise the targets from the ancillary health programme.

The Central Council for the Education and Training in Social Work which was also campaigned unsuccessfully, so far, for courses to be given protected status said this week that NAB's decision was particularly worrying considering the Koseda inquiry.

Liverpool and Bristol, however, which are isolated geographically from the other schools, have said further collaboration is not possible, and are urging the closure of two schools.

London, Edinburgh and Cambridge are proposing other options such as rationalizing pre-clinical and clinical education in neighbouring institutions, while Glasgow believes that all six schools should be retained with increased collaboration.

A further meeting of the group is planned for April 18, when the deans will attempt to produce a joint proposal.

The UGC's veterinary and agricultural subcommittee meets to present its views to the UGC main committee in May, with a final decision being reached in November.

DON'S
DIARY

SUNDAY

Find a copy of last Friday's *THES* and discover my letter about Dan Dare and Professor Peabody has been published. A first for me both in the paper and on that topic. Read *The THES* and *The Observer*, then sit at desk for the day. Three blessings of a sabbatical: no marking, no draft theses, no telephone calls.

MONDAY

Catch local train out to Folmer to spend day in my temporary office, loaned by Sussex University for my visit. The library here is full of books and journals I haven't read, which is a benefit of being attached to another institution, but there are also gaps which reveal only too clearly how stretched funds are now.

The leave is primarily devoted to writing a book, but I am also catching up with my reading on Mediterranean anthropology and women's studies. The former will be built into the existing course on Mediterranean societies for University College, Cardiff's European Community studies degree; the latter essential for the part-time MSc Econ in women's studies that UCC is starting in 1987. The course represents co-operation across a wide range of departments in three faculties, and should be exciting to teach on. However, like so many other innovations these days, the time and energy it needs have to be stolen from previously private time.

TUESDAY

Start the day by going to the public library to get some leisure reading and buy some postcards of art objects in the Brighton museums to send to friends in Cardiff. There is a lovely range of postcards, but one man did raise his (splendid) eyebrows at being sent an art nouveau mural of fairies last term, so I must choose something more sedate this time.

Once at Folmer draft a section of the book on the sociology of occupations and how it needs to be re-focused in the light of several bodies of criticism. In the afternoon go to a staff seminar with the social anthropologists, who have kindly invited me on the strength of my first degree. The session lasts two hours and is set to continue in a bar, but falling snow decides me to head for home while trains are still running.

WEDNESDAY

The day starts with an unwelcome reminder that my precious six months is nearly over. In the library I am politely reminded that my ticket expires on April Fool's Day and so all my books are stamped for the end of March. Also receive letter from Cardiff about the September conference of all the heads of Welsh secondary schools which is hosted by UCC this year. Last time they were in UCC I gave a talk (wearing red dungarees) but was not otherwise involved with the meeting. As an official representative of the college this year I shall be involved with both the planning and the actual event.

A friend in the education area at Sussex, where I am based, has read a draft of one of my chapters and found several mistakes and a few rough patches. He gives me an hour on the topic, which I feel conscious he can ill spare from his own work because "research time" is precious. Such mutual help and hindrance is the best and the most embarrassing part of being a guest in another department. To be a full-time author, when everyone else is lecturing, giving tutorials, marking essays and overseeing teaching practice, feels like being the salt that is rubbed in their wounds.

THURSDAY

On sabbatical the amount of mail is so tiny that any letter is an event.

After two years as a dean, where every post brought piles of committee papers, student cases, circulars, brochures about office equipment, requests for reference and other headaches, getting only personal mail is lovely.

Today there is one letter from a colleague who is editing a book and wants a chapter drawing on the ORACLE project data from Maurice Galton and myself. Although this ESRC project finished in 1984 there are still some unpublished data, so we will be glad to accept. Unpublished data always re-approach me like leftover food in the fridge: I have to produce further papers from the food, or I feel very guilty.

Another letter was from a publisher about the cover of our forthcoming book about the ORACLE project, which is grinding its way through the printing process. Luckily Maurice was in Brighton last week (to lecture to 200 primary teachers in their own time) so we were able to discuss the cover over tea. The ORACLE project has proved to be of great interest to teachers all over the country, and has kept all the team members busy speaking long after it was completed.

FRIDAY

Catch train to London to represent the British Educational Research Association at the AGM of the Association of Learned Societies in the Social Sciences (ALSISS). This is held at the Royal Geographical Society's Building in Kensington Gore, opposite the Albert Memorial. The RGS building always produces nostalgia for Gifford College, which I always found a welcoming building, particularly at the end of a cold bicycle ride home. The RGS have provided rooms for meetings for the association regularly, so I feel quite at home when signing in. Indeed the RGS have been enormously supportive of ALSISS in many ways since it began.

There is a fascinating exhibition in the RGS of the work of the British School at Athens, which celebrates its centenary this year.

There is an appeal for funds for the British School to enable them to extend the library and start some scholarships for Greek or Cypriot students to visit the UK. How does one choose between appeals from both alma mater, one's current employing institution, the Wendy Savage Defence Fund, OXFAM and the British School at Athens?

The ALSISS AGM goes off smoothly including the elections for the new committee, and I am able to get agreement that ALSISS should collaborate with the newer body SCASSU. This Standing Conference of Arts and Social Sciences in the Universities is only two years old (to ALSISS's five) but some aims overlap, and it is important that effort is not duplicated. ALSISS represents the Learned Societies, and so is made up of bodies such as the British Psychological Society and the Institute of British Geographers.

SCASSU is an organization of faculties and schools, and therefore unites the different universities. Both are necessary to speak for social science - and in SCASSU's case for the humanities as a whole too - and it is marvellous that there is agreement to co-ordinate effort.

Travel home just ahead of the rush hour and make a risotto.

SATURDAY

Main preoccupations today are test matches in West Indies and New Zealand, and keeping fingers crossed to see if the Saluts can manage to win an away game. It looks as if I will win my regular bet with John Blogg, the manager of the UCC/UNIST bookshop that my team will finish higher in the First Division than his (Aston Villa), but that is not much of a consolation for supporting a team that cannot win away.

PHD vign and that a colleague is recovering from an operation. Find this week's *THES* in a shop and bear it home to a blessedly warm flat.

Sara Delamont

The author is a senior lecturer in sociology at University College, Cardiff, currently on sabbatical leave at the University of Sussex.

Graduates snub civil service

by Peter Aspin

Only 55 out of 2,685 Cambridge University graduates entered the Civil Service, local government and the National Health Service in 1985 - the lowest figure for at least ten years, says a survey on student job destinations.

A report published by the Cambridge Careers Service Syndicate says the latest figures are a "far cry from the days when the Civil Service was high in the list of choices of many Cambridge graduates".

The continuing and growing unpopularity of teaching as a career was a "depressing" feature of the year under review, the report added. Although there was no further drop in the proportion of students going on to do a postgraduate certificate in education,

many graduates currently doing the PGCE or studying for the BEd at Homerton College were seeking jobs outside teaching.

"Perhaps more significantly, during the year 30 existing teachers returned to seek advice and information to help them leave the profession," the report says. The national decline in physics applications was also reflected in Cambridge - no physicists from the university went into teaching.

There were small increases in the proportion of graduates training to become solicitors and joining firms of chartered accountants, while those entering industry also rose from 14 per cent to 15 per cent.

The survey shows that the most successful graduates were women

studying technology - only

of these were still seeking jobs at the least successful were arts subjects - 14 per cent

The report admits, however, that snapshots of career destinations, six months after graduation, are unsuitable in some cases. "Employment is a much longer than it used to be, and particularly true."

There was also an increase in the number of new graduates replying to the syndicate's survey, a proportion of "unknown" per cent, for "reasons which are clear".

Better de
sought for
job losers

by David Jobbins

Up to 80 lecturers in Hereford Worcester face redundancy after the Conservative-controlled education authority has postponed sending individual notices until it has further talks with college principals.

Individual redundancy notices due to be sent this week, but Mr Turnbull, the county's chief education officer, has told principals the exact will be put off until they provide more information.

But this week he said that the general notification of redundancies beginning from August 31, given to the recognized trade unions earlier this month, still stood.

The authority wants to shed jobs in its drive to match the local education service to the needs of local employers. In some cases college principals, who were asked to identify candidates for redundancy, have proposed redeploying posts which officers believe should be preserved, or whose loss would upset the academic balance of the colleges in the county.

The decision to issue redundancy notices followed a breakdown in negotiations over a premature retirement compensation scheme which would have allowed jobs to be lost on a voluntary basis, but leaders of the National Association of Teachers in Further and Higher Education objected that the scheme suggested by the employer did not give automatic enhancement of pensions.

But the authority believes it could find sufficient takers without offering enhancement of pension payments. Nathe's negotiators last week withdrew from talks with the authority when it refused to put off the date for sending out individual notices. Despite the postponement, it is still likely to ahead with sanctions including an overtime ban when the new term begins next month.

De La Salle safety net
collapses again

by Patricia Santinelli

De La Salle College has told the Secretary of State for Education that its merger plan with Liverpool Institute of Higher Education which might have ensured its survival has had to be abandoned.

This means almost certain closure for the Manchester-based college which has been in financial trouble since 1982. Its last reprieve was in 1985 when Sir Keith Joseph vetoed the National Advisory Board's recommendations for its closure and gave De La Salle until next Monday to work out a merger with LIHE.

But in his letter to Sir Keith, Bishop Patrick Kelly, chairman of De La Salle board of governors says that after a

series of meetings between the two institutions and a meeting of the governors, merger plans have had to be buried.

LIHE decided to withdraw from the merger negotiations following a statement from the trustees of De La Salle College saying that they could no longer support the proposal due to legal and financial implications.

The major sticking point appears to have been that if the college and its site had become part of the LIHE, the liability for the students but would have had no help towards the cost of maintaining the buildings. The trustees felt that this made the merger an impossible proposition.

Training to stimulate growth

A new £62,300 boost to a higher education and industrial network embracing four regions has been launched by Sir Keith Joseph, Secretary of State for Education.

The new project brings an injection of additional cash to the Business Strategy Network established in 1984 between the universities of Aston, Bath, and Nottingham and Slough College, and involving industries in each area.

The new project will seek to involve smaller and medium-sized firms in establishing management training for companies which do not arrange in-house programmes.

New materials in management education are to be prepared by Nottingham University's labour and management studies centre, which will consult with industrial and business partners over the venture.

The new materials will then be tested out by firms participating in the scheme in the East Midlands.



Trying to get to the church on time are Terry Aday, (left) the groom and a teacher of English as a foreign language, and his best man Gareth Jones, a photography student at Swansea College, who were hoping this week to raise around £2,000 for the charities, Multiple Sclerosis and Muscular Dystrophy by walking the 160 miles from Oxford to Barnsley where the wedding was taking place.

Big increase
in union
membership

by David Jobbins

Student teachers are flocking to join trade unions despite the contraction of teacher education and the effects of a year of disruption in the schools.

Both main teacher unions are reporting substantial increases in their enrolment of students over the past year with the National Association of Schoolmasters/Union of Women Teachers growing rapidly but still trailing behind the National Union of Teachers in total numbers.

The NASUWT's student membership stood at 15,365 at the end of 1985, more than 2,000 members more than were on the union's books at the end of the 1984/85 academic year. That figure was itself a record, in turn more than 13.5 per cent higher than the previous year.

The growth for the NASUWT, which largely recruits among current teachers at secondary schools was remarkable against the background of the run-down in secondary places.

NASUWT made a point of maintaining a presence at enrolment days and teachers' fairs, and has established continuing contacts with the National Union of Students.

The NUT's growth has also been substantial since student membership dropped to a trough in 1982, when it had just 10,400 on the books.

Transbinary credit: minister
asks for university support

An appeal to universities to respond to attempts to establish a new transbinary credit transfer network was issued by Mr George Walden, minister for higher education, last week.

The launch of the scheme by the Council for National Academic Awards received a warm welcome from Mr Walden, coupled with the hope that the bid would not be rebuffed by the university sector.

The CNAA has created a special unit to assist students who wish to build up a degree through credit accumulation, studying at separate institutions where necessary. A pilot project is being established with higher education institutions in London, but it is hoped to extend the facilities to other networks of institutions.

The unit will also liaise with industry and the professions to provide accredited training and validate existing in-house training where appropriate.

Describing the new venture as a "highly imaginative response" Mr Walden hoped that the transbinary aspect of the scheme would be developed and not met by a "somewhat superior silence" from the university sector.

Dr Edwin Kerr, the CNAA's chief officer, revealed that the council had been astounded by the enthusiastic response from industry to the scheme, and had led to the suggestion that training within industry should be allowed credit rating.

The CNAA unit is also hoping to aid industry to develop further courses in conjunction with higher education institutions.

In professional education the unit will be engaged in designing indi-

Don't change funding, begs principal

by Olga Wojtas
Scottish Correspondent

A single planning and funding body for Scottish tertiary education would force Scotland's eight universities to become inward-looking and defensive, Heriot-Watt's principal has claimed.

Dr Tom Johnston praised the Scottish Council for its "extremely incisive analysis" of Scottish higher education in much of its report, but criticized its main recommendation on future organization and funding arrangements.

Heriot-Watt's response to STEAC backs the option of a joint planning body for the universities and non-university sectors, but with funding arrangements remaining unchanged. It says it is a serious defect of the report that it does not examine this option in any depth.

STEAC's preferred option for a joint planning body includes a second tier, which would make decisions about allocating funds received, but Heriot-Watt rejects this as an unnecessary and cumbersome elaboration. It also opposes the suggestion that STEAC's responsibilities of the University Grants Committee would be exercised through a subcommittee.

As an autonomous body, Heriot-Watt values its direct link with the UGC, it comments, and does not consider a special subcommittee as the best means of coordinating Scottish university matters.

However, Strathclyde University has announced its "unreserved support" for a single planning and funding body for Scottish tertiary education. It adds that there must be the strongest guarantee of the transfer of the current level of UGC grants, and continued

access to research funding.

It endorses STEAC's view that the urgent need for more and better scientists and technologists can be met only through an adequate supply of entrants to higher education.

But it says this implies an increase in the number of teachers who can encourage youngsters to enter science-based courses, and urges an expansion of "hands-on" inservice training for teachers in computer science, electronics, and mechanical and systems engineering.

Strathclyde accepts the need for rationalization among the colleges of education, but makes a special plea for Craigie College of Education. It already has links with Craigie, which it says has both the lowest unit cost and best graduate employment record among the education colleges, and says it wishes to be jointly involved

with the college in prospective postgraduate courses for science and engineering students.

Lothian Regional Council, however, questions STEAC's view that teacher training should continue to be provided in the specialized and separate colleges of education sector.

A joint working party of the Scottish Education Department and the Convention of Scottish Local Authorities should be set up to examine the college of education structure and consider whether there should be greater collaboration with other sectors. This investigation should include the STEAC proposal for the retention of a separate Roman Catholic college. Both Lothian and Heriot-Watt are critical of STEAC's proposal to set up a Scottish Institute of Technology, incorporating the six technological central institutions.

Library
should aim
to serve

by Patricia Santinelli

Top priority should be given to exploiting the collections of the Library Association's library, making it more service oriented, says a report published this week by the British Library.

The report *The Professional's Library* is based on a review and a survey of users. It says that the library's greatest assets are its collections but that if it is to meet the needs of current and future users, it must become more service conscious.

As a first step in collection development it recommends the acquisition of current publications. The library should also maintain a national archive for printed and non-book materials of British librarianship.

The report also says that the library should cover a broader spectrum of topics, but should reduce its acquisition of non-British material, as the review found that more than 70 per cent of users never used foreign material.

The library now costs the British Library over £370,000 per annum, a figure many times the expenditure in 1979 when the BL took it over. In the light of this it now calls for a renegotiation of the terms of the Memorandum of Understanding between the two parties, together with a closer look at charging policies and opportunities for sponsorship and new fee based services.

The report identifies three groups and different means of funding. The first is headlined "public good" to be funded out of taxation, and includes the collection, management, reference use of the stock and reading room facilities.

The second is also classified as "public good" with charging tempered by policy considerations. This covers areas such as loans and photocopying services, reading lists and trade literature. The third is defined as value added services.

College needs
to spread net

Recruitment of more students from differing denominations and faiths is urged by Her Majesty's Inspectorate in its report of Plater College, Oxford.

It is among recommendations for improving provision at the essentially Roman Catholic adult residential college.

In suggesting a wider circle of recruitment to place itself among the mainstream adult colleges, the HMI report says Plater should broaden the theological dimension of its teaching to include wider Christianity and an element of comparative religion.

Such a step would stimulate discussion among students from different religious backgrounds.

HMI also urges a more flexible approach to the differing aptitudes of students. The report points out that though the two-year course at Plater provides satisfactory preparation for higher education, it takes students well into the first-year level of some undergraduate studies.

There is also criticism of the college library facilities but the report praises students as lively and thoughtful.

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STurn up, tune in,
stay out . . .

An "off-with-their-heads" solution to the problem of overcrowded meetings from Sir Douglas Hague, chairman of the Economic and Social Research Council. Sir Douglas, who once wrote a paper entitled "How Adolf Hitler reformed Whitehall", told a House of Lords select committee that there were far too many people at meetings of the Advisory Board for the Research Councils.

The answer was to have only one research council chairman at each ABRC meeting, he said. "There's no reason why the rest shouldn't watch what's going on from outside on closed circuit television. If they felt impelled to make a contribution, they could."

Learning's
biggest catch

The Open University's first vice chancellor, Lord Perry, was telling tales out of school when he recently addressed the Australian Maritime College in Tasmania. One of the OU's first students, a cod trawlerman, had found the hardest thing about studying was understanding some of the words in the course material, he confided. And added that the same illiterate student was now a senior lecturer in fisheries at the college.

The TV thriller Taggart had a familiar face among the tough Glasgow cops hunting a murderer who left pieces of his victim scattered around the city. Step forward Stuart Hepburn, who in the 1970s was prominent at National Union of Students conferences. Mr Hepburn, who played a hard-drinking detective deserted by his wife, presumably found no difficulty in moving from one fantasy world to another.

Set to go
forward

"Auriol gets her aerial" is the latest headline down at the Committee of Vice-Chancellors and Principals. Their new press supremo Auriol Stevens, a month before she actually takes up her post, is already bringing in new technology (old technology for the rest of us) by insisting that the v-cs install a television. The aerial arrived this week. Auriol, coming from Channel Four's *A Week in Politics*, may feel the need to watch something that moves once her new job begins.

In pursuit of
cash bonus

On the principle that the last shall be first, Lucy Cavendish College, incorporated fully into Cambridge University only this year, is nevertheless making its competitive mark. Its students are to challenge members of more ancient colleges to a contest of Trivial Pursuit.

The college - for mature women only - is short of cash. The students' money-raising idea is sponsored Trivial Pursuit games leading to a college league. The date has not yet been set for its launch, but a preliminary informal skirmish with research students from Peterhouse proved that academic longevity isn't everything: the Peterhouse historians didn't just fall at standard hurdles like Superman's birthplace or the number of furloms on the Titanic, but failed to answer a single history question as well.

Two members of Aberdeen University's law faculty have been rushed to hospital for appendicectomies within a week. Other faculties fear this is the prelude to a stranglehold argument that law has now suffered its share of academic cuts.



A Trent polytechnic final year student, David Villiers, beat professional designers, like Conran Associates, to win the £2,000 prize in a competition to design furniture for civil servants and government ministers. The competition was organised by the Crown Suppliers and administered by the Design Council.

Look back
in anger . . .

The petty irritations of life, and how they can turn the meekest of introverts into raging monsters, are to be the subject of an experimental psychology study by researchers at Birmingham University.

Lecturer Dr Kevin Howells has been awarded a £40,000 grant by the Leverhulme Trust to investigate the self-regulation of anger in everyday situations.

A representative sample of the general population will be asked to monitor and describe anger experiences as they occur in their lives, and a range of clinical and psychometric methods will be used to assess them.

Dr Howells said that experimental study of the emotions had gathered pace over the last 10 years, but the main emphasis had been on anxiety and depression.

"Anger has been a relatively neglected topic. What is lacking is information about how anger arises in everyday life, about the nature of the environmental triggers for anger and about the cognitive processes that accompany the emotion."

His particular interest is in the strategies people use to control anger when its overt expression may be inappropriate. "The longer term objective of this research is to further our understanding of people that have problems in regulating anger."

Dr Howells said there was evidence that violence in the mentally ill, child abuse, violence between spouses and other forms of aggressive behaviour were sometimes the product of deficiencies in anger-control systems.

Labour in-fighting for NUS posts

by David Jobbins

Rival factions of the Labour Party are battling for control of the National Union of Students with other political groups consigned to the sidelines. No fewer than three Labour members are contesting the presidency.

The National Organization of Labour Students, which has dominated the NUS since it won power in 1982, is fighting off a concerted attack by a loose coalition of left groups.

It will face challenges by Labour Party members in several of the key votes for full and part-time members of the executive at the Easter conference in Blackpool next month.

The NOLS Democratic Left leadership has been criticized for concentrating on tackling the threat within its own ranks from Militant at the expense of turning the NUS into an effective campaigning organization fighting on student issues such as grants and education cuts.

These charges are hotly contested by the NOLS candidates but some of the criticism may stick.

But the NOLS is caught in a pincer movement from within its own party. The main challenge to its presidential candidate, Ms Vicky Phillips, is from Mr Andy Whyte, standing on the Left Alliance ticket but a prodigious Labour Party member and supporter of the Labour Co-ordinating Committee.

Since the decision by the Communist Students to pull out of the alliance, its control has become more firmly entrenched in the grip of disaffected Labour supporters like Mr Whyte and Liberal students.

The alliance's other candidate for full-time officer is a Liberal, Mr Sean Williamson, while Communist students - Mr Paul Hassan and Ms Mary Browning - are standing for vice-presidents education and welfare.

But the NOLS also has to contend with candidates from the Socialist Organizer-backed Socialist Students in NOLS, who are fighting three full-time and four part-time places.

While there is no SSIN candidate for president, the NOLS' second Labour challenger is Mr Richard Hull of the

The Fight for the NUS leadership 1986							
Group	President	Secretary	Treasurer	Education	Welfare	VP FE	part time
NOLS Left All	1 (Lab)	1 (Lib)	1	1	1	1	4
CP	1	1	1	1	1	1	1 (Lib)
SSIN	1	1	1	1	1	1	1
SDPS	1	1	1	1	1	1	1
SWSS	1	1	1	1	1	1	2
Green Action	1	1	1	1	1	1	4
Lab	1	1	1	1	1	1	1
Solidarity	1	1	1	1	1	1	1
Others	2	1	2	1	2	2	5

Labour Student Solidarity Campaign, an avowedly moderate grouping with links with senior party leaders including Mr Peter Shore, Mr Gerald Kaufman and Mr Roy Hattersley.

The elections mark the return to student politics in a big way of the Socialist Worker Student Society, which is contesting all five full-time and four part-time seats, including the presidency. Another revived force are the ecologists in the shape of Green

Action. Social Democratic Party Students are not contesting the presidency this year, but stand a chance of the treasurer if NOLS' vote slumps.

There are no declared Conservatives of any complexion this year. It is understood, however, that one of the six candidates for treasurer has Conservative associations, and is standing principally against the NOLS candidate, Ms Maevie Sherlock.

Engineers want bigger say in course design

by Karen Gold

Existing mechanisms for finding out what employers want and need from higher education are totally inadequate, according to the Engineering Employers' Federation.

If higher education is to make a more effective contribution to wealth creation, it must involve employers more in decision making, says the EEF response to the Government's Green Paper on the development of higher education into the 1990s.

In particular, employers must have a bigger say in the distribution of money between institutions - particularly by the University Grants Committee - in the design of courses, and in the selection of potential students.

"Senior industrialists' participation as members of university councils and governing bodies of public sector institutions... will depend on the degree to which they are able to influence the distribution of resources and the academic pattern of the institutions," it says.

Current consultation mechanisms are totally inadequate, contrary to the impression given in the Green Paper. "College consultative committees are rarely used effectively; many educational establishments eschew industrial participation in the determination of course content and few are disposed towards, or skilled in market research; the Regional Advisory Councils are dominated by educationalists and so organized as not to attract employer participants."

Employers should be more involved not only in producing selection criteria for students but also in the selection process, the response says. A levels are not good predictors of future success, while successful collaboration already exists in sponsored first degree stu-

dents and teaching company schemes. Such arrangements could be promoted through course accreditation and funding mechanisms.

"Two-stage selection processes are not satisfactory because some of the more employable students may not pass the academic vetting," the EEF says. "It must be possible for industrially-sponsored students to enter higher education without the normal academic qualifications."

Industry will need more continuing education and institutions should be organized to recognize this area, by rewarding it as the equivalent of research in staff promotion, and possibly in moving to a four-term year to fit short courses in more evenly.

Adult and continuing education should not just be concentrated in the polytechnics and colleges as the Green Paper recommends, but should be expanded in universities too.

The federation supports the Government's existing "switch" of resources to science and technology and calls for it to be extended. These subjects should take up a greater proportion of higher education in future. But it questions government projections of falling student demand and is "very concerned" at the suggestion of closing colleges.

The federation says it supports the Government's efforts to improve cost-effectiveness in higher education, but says institutions will be unable to change quickly enough and provide new staff and equipment on the projected spending levels. Industry is unlikely to provide extra money for higher education except in continuing education, it says: the bulk of spending, particularly on undergraduate education, should come from the Government.



The hardest mountain in the world faces Birmingham Polytechnic attempting to be the first to reach the summit of K2 - "The Savage British expeditions to K2 have failed to reach the summit: this one, at using oxygen or sherpas. Mr Wilkinson, one of Britain's top climbers who has made five previous visits to the Himalayas recently made the first solo ascent of the Neshorn in the Alps.

PARTY LINE

Pity the poor polytechnic - again!

ally by allowing tax relief on gifts to charities. If American experience is anything to go by, higher education could gain substantial injections of money from industry and commerce. Though as it stands the measure is perilously divisive: the universities will attract money from the polytechnics, who unless granted special status in the Finance Bill will not fall into the charitable category which would allow them the tax benefits. Having checked with the Chancellor's office no one seems to have given a thought to the poor polytechnic - yet again!

Mr Bryan Nicholson, the chairman of the Manpower Services Commission, rather overdid it a bit when he called management and

workers "a bunch of thickies". But he was summing up one of the basic problems in British industry and successfully drew attention to it. British management has not fully appreciated that training and better education for its workforce is a worthwhile investment which pays off in productivity and improved competitiveness.

Management is itself in need of better training. We would not now be in the British Leyland mess if years ago that company had had better management, training and more resources in design and development. In the mid-1970s BL was producing designs which no one wanted, on out-of-date machinery, with a strike-prone workforce and the lowest productivity in

Europe. Because of missed opportunities then, we are now told that the company is no longer strong enough to go it alone. This is not a thought that would ever have entered a Japanese head in the post-war years, nor did the Italians five years ago shrug off Fiat. Whatever the arguments about the long-term advantage to consumers ill-thought-out takeovers of key industries will put jobs massively at risk. Ford clearly wished to take over Austin-Rover in order to rationalize an over-producing European industry. They were stopped. But our approach is too piecemeal. There has to be broader consideration.

At the heart of competition is product design. We have a colossal

Cash aid for worker education

Extra cash is to be made available to the Workers' Educational Association to assist seven of its districts in financial crisis.

The aid, amounting to £24,500, is being paid out by the Department of Education and Science to the WEA's three Scottish districts which have been forced to liquidate financial reserves to survive.

Over the last year the WEA has found its income under three fronts: the new DES funding extramural departments led to universities retaining the cash obtained for joint ventures received from local authorities been reduced, and the DES is to alter the system of grants to WEA districts.

Last year, Mr Robert general secretary of the WEA that several of the associations were on the brink of bankruptcy. "We are very pleased to receive this additional money, especially pleased that the DES recognized districts have some financial difficulties outside their control," Mr Lochrie said.

"We have also welcomed attention by the DES that we consider further how income increased and expenditure reduced. We will gladly talk to them about it."

The allocation of extra cash is made as an addition to the 1984-1985 grant from the DES.

Mr Lochrie said it was not possible to assess the financial position of WEA districts at the end of the current financial year.

The WEA is now awaiting a response from the DES to its proposals for a new funding system. The DES put forward plans to which the WEA has proposed amendments.

The association wants 50 per cent of grant aid to be paid directly to districts for administrative costs. A further 25 per cent would be allocated to student attendance, and a further 25 per cent would be paid to the WEA nationally to be allocated according to social and educational priorities in each district.

Ties of blood

Brighton Polytechnic staff helped raise £15,000 for a "cell-saver", blood recycling machine - which was handed over to the Royal Sussex County Hospital. The appeal came after polytechnic technician Len Williams' life was saved by such a machine on loan to the hospital last year.

Name check

Professor A. W. Bradley, of the department of constitutional and administrative law at Edinburgh University, is a member of the University Grants Committee social studies sub-committee. His name should be added to the membership list published in *THE TIMES* of March 14.

research and development expenditure in defence with remarkable little spin off in commercial forms. But that is not good enough for the Treasury's refusal to let basic research more generously. We are to have a national strategy and development must rest at the heart of it. The whole argument about foreign ownership needs to be examined in terms of how much and D foreign ownership would one way downward slope if we are to assemble other people's designs based on research and development elsewhere.

Mr Lawson relished attacking the Aldington report on manufacturing industry. And in this lies the answer to reviving the D effort and the training industry which will make manufacturing industry match its rivals abroad.

Keith Hampson

RM NIMBUS WINDOWS

WIDEN YOUR VIEW

Windows,* the latest software advance from Microsoft, lets you look at computing in a new light - and RM Nimbus, with its brilliant graphics, makes the most of this new facility.

Now you can run MS-DOS packages, several at a time, each in its own window. You can work on your spreadsheet without having to leave your database system, and by using the mouse to point your way around the on-screen icons, you don't have to remember file names or look up operating system commands.

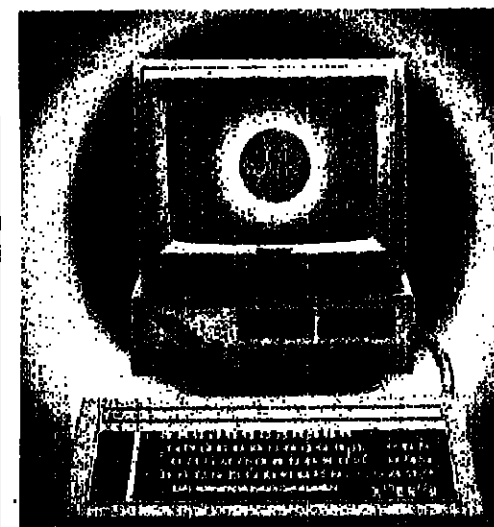
You can create reports by pasting in different data from different packages by different suppliers. For example, you can write text with MicroPro Wordstar* and integrate it with spreadsheet figures from Microsoft Multiplan.* And then illustrate your

report with diagrams and headings in special fonts using facilities provided free with the operating system.

And this is just the beginning. Software vendors are working on a new generation of applications to exploit the outstanding graphics and ease of use made possible by Windows.

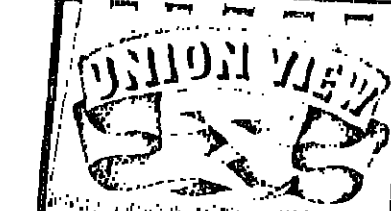
This advanced environment needs extra processing power, ultra fast graphics and a large main memory to be effective. With its 8MHz, 80186 processor, up to 1Mb of addressable RAM and custom colour graphics chip, Nimbus makes Windows work for you.

Windows on Nimbus. The natural choice. For further information, contact Research Machines Ltd, Mill Street, Oxford OX2 0BW. Tel: Oxford (0865) 249866.



*Wordstar, Windows and Multiplan are trade marks.

RESEARCH MACHINES
MICROCOMPUTER SYSTEMS



Dangers of 'rational' planning

While long supporting sensible planning of higher education provision on a national basis, the National Association of Teachers in Further and Higher Education has from the outset been alert to its possible dangers. Planners, particularly those charged with national planning, are always in danger of succumbing to the deadly pressures of rationalization.

No one, of course, denies that it makes sense to assess periodically whether courses and provision can be delivered more effectively. Rationalization and concentration should not, however, become a planning principle. The National Advisory Body committee has repeatedly said that there is no policy of concentrating provision in the sector, a point of view sharply delineated from that of the Department of Education and Science.

Planners themselves seem to succumb to it, not so much as a reflection of political principle, but almost as a sign of impatience at their failure to establish the control over the ordinary world which would doubtless make their lives a good deal easier. Yet it is the very complexity and diversity of modes and levels of courses and the multiplicity of outlets and access points which is the hallmark of the public sector post-school system.

This is particularly important if the whole of the system, higher as well as further education, is to deliver their part of the education needed not just for the 18-21 age group but for the full range of adult education.

Whatever policy perspectives ministers might adopt, the DES has always been fatally inclined to view public sector higher education as a more vocational mirror image of the university sector. To anything else they have, over the years simply paid lip service. The NAB planning officers however ought to be imbued with a wholly different ethos. Everything that NAB has indicated is a hallmark of the system it is committed to support, would suggest the need to retain the maximum diversity, flexibility and multiplicity of outlets for the widest possible range of courses.

Certainly the system is grossly under-funded. Certainly if the sufficient money into the system a number of NAB's principles and commitments will be brought sharply into conflict with each other. That, however, is a political issue which ought to be addressed and discussed not just in the NAB board and committee but by the widest possible audience.

That is why a number of informal planning indications, relayed by the NAB secretariat to institutions and which bear all the hallmarks of a programme of concentration should be fiercely resisted. At this stage the battle is certainly about to be joined openly to get the Secretary of State to put sufficient resources into the system.

Offering up concentration of provision is playing the DES game, and one thing we have all learned over the last few years is that far from being rewarded (remember the "switch" money?) the department perceives this as a sign of the correctness of their policies. We will of course be awaiting the details of the planning proposals which will be announced on April 7. But we give notice now that this is a battle we shall certainly fight to the bitter end.

Jean Bocoock

The author is assistant secretary for higher education, Naifhe.



Queen Margaret College, Edinburgh, plays host to the city's Lady Provost, Mrs Cathy Mackay, accompanied by Mrs June Leach, (right) wife of the college principal, Mr Donald Leach. Mrs Mackay is seen examining the work of three first year students in the BSc Science and Dietetics course. (left to right), June Marshall, Karen Honeyman and Eleanor McGill.

DES scrutiny 'unhealthy'

by Felicity Jones

The scrutiny under which the universities are being put is unhealthy although in some cases justified, the annual conference of the independent Higher Education Group of academics was told at St Anne's College in Oxford last week.

More often than not in the past few years Department of Education and Science policy has been financed led, said Professor Brian Gowenlock, professor of chemistry at Heriot-Watt University and a recent member of the University Grants Committee.

"Sometimes I think that 'Treasury Rules OK' should be sprayed outside the UGC offices, remembering that Treasury policy is always finance led," he said.

Professor Gowenlock said that the universities were under scrutiny for their performance in all sorts of ways and "perhaps at times the scrutiny is not quite healthy".

He confessed to feelings of exasperation at what he saw as some of the "diversionary tactics" being used by the Government, which he said had avoided most of the recommendations in the Jarrett report but had leapt to set up the Croomham committee to investigate the UGC.

Lord Perry of Walton, founding vice-chancellor of the Open University outlined some of the pressures the university had experienced in its formative years.

He said it had been a gigantic gamble and show of faith which had come good but Lord Perry did not believe that the OU model could

"There are many people in the universities who ignore these developments but fortunately there are others who keep abreast and steer a course through."

"There are people who compound their difficulties by confusing 'ought' with 'is'. They believe the universities ought to be funded in a particular way and want to find someone to blame like the UGC."

He detected a number of timebombs ticking away but he did not know how long were the fuses. These include: research selectivity, the disparity between the north and south, status of overseas students and manpower planning.

He wondered what was to become the future of arts-based education in the universities when overall in-take had been chopped by over 14 per cent and pointed to a more dirigiste system than ever before.

Mr John Smith, secretary of the Imperial College of Science and Technology said the collegiate system of administration was inadequate to meet the pressures and complexities of scale of a big civic university.

In order to move away from decision-making by committee two factors had to be kept in mind. Responsibility had to be devolved to the lowest level and decision-making should not be elevated so high that people feel they have no control.

Worldwide search for students

by David Jobbins

A renewed drive is being launched to encourage more would-be postgraduate students to study at British universities. Of 1,010 successful candidates in the Overseas Research Awards Scheme in 1985, more than half were already studying in the United Kingdom.

Organizers of the scheme, which is administered through the Committee of Vice-Chancellors and Principals, say they have always endeavoured to bring to the attention of potential research students in every part of the world.

But they admit it is to be expected that many candidates will be studying in the UK at the time of their application, while travel expenses and the

costs of living in a foreign country will deter others. But they are to make further efforts to publicize the scheme in the hope of increasing participation by overseas students still living abroad.

In 1985 the proportion of supported applications from would-be students still at overseas universities rose to 40 per cent in 1982. Of the 1,010 successful candidates in 1985, 457 were resident abroad at the time of their application.

The organizing committee expects that a record 86 per cent of the 1985 awards were taken up, compared with 80 per cent in 1984 and 62 per cent in 1980, the scheme's first year of operation.

Of the 102 successful applications who later turned down an award, 43 gave financial constraints as their reason. This was the largest single category of refusals, the next most common reason, given by 26 applicants.

The 865 awards actually took up the 1985 award pool more than 1,000 previous years, including four from the first year of operation. The scheme has soared with increasing numbers and the widening gap between "home" and "overseas" fee levels. Estimated spending in 1985 is expected to turn out at £2,249,000.

The United States heads the list of applications and awards offered, followed closely by China, Canada, Hong Kong and India.

HMI accolade for Bretton Hall drama degree

Bretton Hall College of Higher Education has been awarded an accolade by Her Majesty's Inspectorate for its honours degree in drama which is described in a report this week as being of very high standard and with immense potential.

"Work in drama at Bretton Hall is exceptional in its challenge and inventiveness, its relevance and its delivery. It is characterized by a genuine quest for practical academic excellence," the report on the non-teacher education provision of the college says.

The inspectorate also praises the college honours music degree which it says has strengths far outweighing its

shortcomings, which should be corrected as the degree settles in. HMI is less enthusiastic about the college's BA in creative arts combined with a generally good standard of more than ordinary degree status - this was being considered by the college at the time of the inspection in 1984.

But it adds that in other respects the same close attention as the honours degrees, and recent history has allowed it to develop piecemeal.

The inspectorate warns however that further development of non-teacher education degree work carries with it resource implications.

"Not only do the inadequacies of the college library provide a handicap to the scholarly study, but the amount of practical performance work now some relief for support staff and in particular for the recognition that a production manager should be appointed," the report says.

Suffolk colleges should make a major effort to introduce more computer applications and usage into the work of all their departments, HMI suggests in a report published this week.

"Specialist computing courses and computer literacy courses are well established, as are courses in word processing. But while there have been

a number of worthy initiatives in other areas, these do not yet amount to a significant penetration of computing across the curriculum," the report says.

The inspectorate's report on computing within further education in Suffolk covered five institutions: Chadacre Agricultural Institute, Lowestoft College of Further Education, Otley College of Agriculture and Horticulture, Suffolk College of Higher and Further Education, and West Suffolk College of Further Education.

HMI points out too that there is a clear need for greater co-ordination between departments in the sharing of expertise and in the use of facilities.

Cuts hit completion of courses

by Peter Aspdon

The total number of students successfully completing courses at undergraduate level in British universities has fallen for the first many years, says a report published by the Universities' Statistical Service.

It shows that 75,967 students completed their courses in 1984, a per cent fall from the previous figure of 76,290. The decrease in the reduced numbers of undergraduate students prompted by the government cuts of 1981.

The statistics also show a 11 per cent increase in the number of students studying on a part-time basis, the total of 6,300 of these, 30 per cent women. The proportion of time undergraduate students who were shown a slight increase to 42 per cent.

There was a 3 per cent rise in the number of postgraduate students, the proportion of overseas students, postgraduate courses increased more than 5 per cent.

The number of university students engaged in teaching and research were paid from general funds fell about 500 to 29,600. This contrasted with the increase of about 1,000 funded from outside sources.

On subject areas, the report shows large percentage rises over the past five years in the number of undergraduate students reading Chinese (126 per cent), drama (59 per cent), surveying (44 per cent) and mathematics and computer science (28 per cent).

Subjects experiencing decline included general and combined physical sciences (51 per cent), botany and forestry (15 per cent) and psychology and zoology (both 11 per cent).

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Japanese invade campuses

from William Norris

WASHINGTON
American universities are finding themselves the beneficiaries of a new tactic in the fierce trade war between the United States and Japan.

With a trade surplus of \$50 billion last year - accounting for almost half the massive US balance of payments deficit - the Japanese have a distinct need to improve their image. And so they are plunging millions back into research projects on American campuses.

The Japanese motives are not entirely altruistic. Most of the research is being supported in exchange for licences to capitalize on the results - a trend which is giving concern to American industrialists who are already struggling to keep up in the competitive high-tech marketplace. But it is their own reluctance to put up the money which has allowed the Japanese to step in.

The University of Arizona, for example, invited American as well as foreign companies to fund its work on digital radiography, which marries computer technology to X-ray equipment for detailed medical diagnoses. All the US firms turned them down, and it was Japan's Toshiba Corporation which came up with \$3.5 million in return for the right to market the equipment.

The total amount of Japanese research funding is unknown, but may well be in excess of \$75 million this year. It is certainly sufficient to have persuaded some of the larger colleges, including John Hopkins University and the Massachusetts Institute of Technology, to set up permanent offices in Tokyo to look for fresh sources of money.

Others have established Japan desks on their campuses and some, like Georgia Institute of Technology, have hired Japanese firms to solicit funds for them on a commission basis. A steady stream of American university presidents have been travelling to Tokyo.

With an estimated gap between funds needed for research and money available of some \$4 billion, there is plenty of scope for the new Japanese philanthropists. The joy of giving has a practical side as well: all gifts to American universities are tax-deductible. Similar donations in their own country would be taxed at 60 per cent.

There always has been and no doubt always will be a huge demand for broadly based first-degree graduates who are recruited for their trained minds, problem-solving capacities, their social skills and their mobility. Industrial and commercial recruiters find that arts and social science graduates meet these requirements and are easily trained in new skills.

The report also questions the additional scientific and technological places in higher education in the absence of an adequate supply of qualified school leavers.

The shortage of well qualified candidates, especially in mathematics and physics, is directly linked to the ever increasing problem of the shortage of teachers in mathematics and physics, says the report. All the evidence points to an increase in the problem, to the detriment of economic recovery and expansion, and the report adds that the problems of the electronics and information technology industries will become particularly acute.

The science faculty of the University of Colombo was not able to re-open as planned on February 27 following the resignation of the dean and heads of departments.

Academics of the science faculties of Kelaniya and Peradeniya have indicated that they will follow suit by April and science faculty members in the other universities are reported to be waiting events before taking action.

At the start of the protest, the long-standing grievances over salaries but emphasized that their attempts to provide leadership in developing teaching and research in the faculty have failed. Recruitment of suitable staff to fill key positions had been difficult and it was impossible to retain the few who accepted jobs.

The senior resignees said, in a letter to Professor Stanley Wijesundera, vice-chancellor of Colombo, that the task of providing leadership to a community of university academics whose frustrations had reached alarming heights was both unproductive and unpleasant.

The chairman of the University Grants Commission and Secretary to the Ministry of Higher Education, Dr Stanley Kalpage said a review of salaries was under way.

The changes will be brought in within a couple of years, affecting those students currently taking their

draft altogether. As a result, many young men deliberately apply to colleges known to have a very low standard. This meant that universities and colleges with very poor academic record would still be assured a full complement of students, particularly over the past few years, when many male school-leavers have seen higher education as the best way of avoiding service in Afghanistan.

The new exam procedures, however, will not make admission any easier for such young men. On the contrary, an interview system will be introduced, which will screen all applicants for motivation and likely success in their chosen subject. According to *Pravda*, this system will give preference to young people who have already begun, while at school, to prepare themselves for their chosen career.

Since 1984, secondary education has been increasingly job-motivated, and the educational planners envisage making higher education similar. The interviews for university applicants, which will determine the "professional bent" of applicants, and, if necessary, counsel them into changing their proposed course of studies, are officially viewed as the first stage in such a reform.

But the changes are causing some disquiet among Soviet Jews. Already there is a strong statistical evidence of anti-Jewish discrimination in mathematics and physics and circumstantial evidence of discrimination in medicine, as far as the most prestigious Moscow and Leningrad institutions are concerned.

Now the Jews fear it will be possible for university admissions boards simply to explain that young Jews gained good marks in their examinations but failed the interviews.

The going-on in the developmental studies programme at Georgia were at the heart of last month's trial, in which Jan Kemp had alleged that she was fired because she complained of preferential treatment given to college athletes. Ms Kemp, who celebrated her 37th birthday last week, described the news of Davidson's resignation as "the best birthday present ever".

Others have not been so happy with his decision. Six vice presidents and 13 deans have issued a statement urging the board of regents not to accept the resignation. Davidson, aged 56, has often been the centre of controversy, but he is widely credited with revitalizing the university.

overseas news

India rocked by high level corruption

from Paul Flather

DELHI

Indian higher education has been rocked by two cases of serious corruption and political interference which have reminded academics that whatever reforms emerge from the current national debate on education policy, far more basic problems remain to be solved.

The biggest scandal which has hit front-page headlines this month involved the chief minister of the state of Maharashtra in the west who has been judged to have manipulated the results of the medical examinations at Bombay University so that his daughter would pass her MD qualifications.

The Bombay high court dismissed the claims of the chief examiner, Dr M. Y. Rawal, that marks on the grade sheets were altered in the "normal exercise of discretion", which he claimed had also helped 11 other "successful" candidates besides the minister's daughter.

In fact the investigating judge discovered that Mrs Chandraka Dawale, who had already failed the examina-

tions twice before, would have definitely failed again if her grades for the obstetrics and gynaecology paper had not been altered by the examiner.

During the hearings sworn affidavits were read confirming that deliberate manipulation had taken place on the instructions of the chief minister, Mr Shivajirao Patil-Nilangekar, who has now been forced to resign in disgrace.

The minister's rather obvious attempts to block the progress of the case with the backing of his state governor also served to confirm everyone's suspicions.

The court, much to its credit, simply refused to bow to any kind of political pressure. It even refused to drop its case when Mrs Dawale tried to have herself declared "failed" so that a more plausible, internal university tribunal could be set up. At this point the vice-chancellor, Dr M. S. Gore, resigned, making his position clear.

As the inquiries continued it also emerged that both the chief minister and the state governor, Mr Prabhakar Rao, himself now under increasing pressure to go, had both been involved

in previous cases of alleged fraud to get relatives into competitive medical colleges.

Also, it has come out that the chief minister is currently registered at Bombay University for a PhD which is apparently being ghost-written by one of the lecturers, an old friend, who has found himself put on several prestigious state committees.

Meanwhile in the neighbouring state of Haryana, court proceedings are starting following the suspension of the vice-chancellor of the Maharshi Dayanand University, Dr Ram Gopal, after he ordered an inquiry into "academic irregularities" by his predecessor, now a Congress-I Party MP.

Dr Gopal, suspended by the governor of Haryana which is Congress-I controlled, has stated publicly that he was summoned to meetings both by the governor and the chief minister and urged to drop his inquiry or face suspension.

He said he refused on the grounds that he would be failing in his academic duty if he did. Dr Gopal had discovered that some two-thirds of the 120 students who won places to study

English at the university had had their marks "improved". With more than 2,000 candidates competition had been stiff. Dr Gopal also alleges that he had found the initials of the previous vice-chancellor, Mr Hardwar Lal, on several of the tampered scripts.

Perhaps the most striking thing about these two cases is how little surprise they have generated in wider circles. The fixing of marks is such a normal practice. It is really the seniority of the politicians involved that has turned these cases into national news.

As one vice-chancellor commented: "Yes, these are deep problems for us. Such publicity is bad for everyone in the system. Not only for Bombay. But you know how difficult it is to stop."

The family pressure to succeed is so great that many feel compelled to buy success at any price.

But the one bright spot is that in both cases the vice-chancellors and the judges involved have stood up to serious political interference. This is a major change from the Indira Gandhi era when everyone bowed to powerful politicians.

Britain joins deep ocean research programme

by Thomas Land

Britain is joining the United States and several other advanced countries in the global ocean drilling programme as a full member.

Some other European countries are expected to join later. The next stage in the programme will extend the search for hydrocarbon reserves to Antarctica.

It involves the collection of samples from the deep earth beneath the oceans, uncovering the composition, structure and history of the planet. One aspect of the work is the mapping of oil and mineral resources buried in the ocean floor - to be recovered in the foreseeable future when the offshore mining and oil industries move into the deep oceans.

The earliest predecessor of the present project was launched nearly 20 years ago by a consortium of American universities and research institutions, which was an international collaborative venture in 1975, eventually involving scientists from the US as well as Canada, Britain, France, West Germany, Japan and the Soviet Union.

The depth of penetration achieved in the drilling programme has recently increased from 7.6km to 10km. And



North Sea drilling: some cash will come from the private oil industry

the annual membership subscription has more than doubled to \$2.5m.

Several new scientific disciplines have surfaced as a result of the programme. One is "palaeo-oceanography" now involving studies of the glacial history of the Antarctic and its influence on the global climate.

The drilling programme has also led to several surprising discoveries rewriting the history of the planet. It is now understood, for example, that the Mediterranean dried up completely about seven million years ago.

Britain's membership in the project lapsed last year because of lack of

Second-chance scheme for school-leavers

Soviet school-leavers will have a better chance of university entrance under an experimental scheme to come into force this summer. Instead of all universities and colleges, apart from a handful of prestigious Moscow institutions, holding their entrance examinations simultaneously in August, as it has been the case for provinces and Moscow city, higher colleges in Leningrad will hold them in July, so that candidates who fail can reapply to provincial universities.

The Soviet Union has no clearing-house system, and, until now, it was impossible to apply to a second-choice university until the following year. This was a particular problem for male applicants who wished to put off their military service until after graduation when they would automatically enter the army at officer rank if, indeed, their compulsory "military" courses at college did not exempt them from the

draft altogether. As a result, many young men deliberately apply to colleges known to have a very low standard. This meant that universities and colleges with very poor academic record would still be assured a full complement of students, particularly over the past few years, when many male school-leavers have seen higher education as the best way of avoiding service in Afghanistan.

The new exam procedures, however, will not make admission any easier for such young men. On the contrary, an interview system will be introduced, which will screen all applicants for motivation and likely success in their chosen subject. According to *Pravda*, this system will give preference to young people who have already begun, while at school, to prepare themselves for their chosen career.

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Radical plans follow reform in Spain

by Sarah Jane Evans

Next month the Spanish government approves a new system of university studies which will have a more radical effect on tertiary education than many of the recent and much vaunted reforms. The plan has come from the National Universities Council and will increase both university autonomy and student choice.

The changes will be brought in within a couple of years, affecting those students currently taking their

bachillerato at school. The aim of the reform is to bring Spain closer into line with EEC practices, to inject a greater professional orientation, to reduce the length of degree courses and to cope with the exceptionally high drop-out rate - a quarter of all students who start a degree do not finish. A new intermediate qualification is to be introduced.

At present, a degree course consists of a three-year first cycle, followed by a two or three-year second cycle ending in the award of *licenciado*, or for the specific faculties, *arquitecto* and

ingeniero. The *escuelas universitarias*, the former technical colleges, offer similar titles after a three-year second cycle.

Under the proposed system, studies in the universities and the *escuelas universitarias* will be brought into line and a diploma will be awarded at the end of the first cycle in both institutions.

Scientific and technical degrees are to be cut by a year to five years, while those arts subjects where an intermediate diploma is felt to be unnecessary will be cut by a year to four years.

Chirac to dismantle science research ministry

from David Dickson

PARIS M. Jacques Chirac, the new French Prime Minister, is planning to abolish the separate ministry for research which was set up by the previous socialist government when it came to power in 1981, and to return responsibility for science to the Ministry of National Education.

He also appears to have downplayed the prospects of radical new innovations for French universities – a potential point of conflict with President François Mitterrand in view of the conservative parties' unexpectedly narrow win in last week's general elections – by appointing a moderate social democrat, M. René Monory, as the new Minister for National Education.

M. Monory was Minister for Economy during the final years of the administration of President Valéry Giscard d'Estaing, serving directly under Prime Minister M. Raymond Barre. A member of the French sen-

ate, he belongs to the relatively small party known as the Groupe d'Union Centriste des Démocrates des Français. Acting under M. Monory as a deputy minister with special responsibility for scientific research will be M. Alain Devaquet, a research scientist by training who has taught at the prestigious École Polytechnique, and was elected to the French national assembly in 1978.

Since 1979, he has been the spokesman on scientific affairs for M. Chirac's party, la Renaissance pour la République (RPR). His appointment, which had been widely predicted, is likely to mean a shake-up for research agencies such as the National Centre for Scientific Research.

During the pre-election campaign M. Devaquet had made it clear that he felt the organization of French science was too heavily centralized, and that greater efforts should be made to encourage universities to develop their own strategies, for example by transferring to them direct responsibility for

laboratories currently operated jointly with the CNRS.

Another close adviser to M. Chirac, Mme Michele Alliot Marie, has been appointed a *secrétaire d'état* (minister of state) within the Ministry of National Education with special responsibility for educational issues.

At a press conference three weeks before the elections, Mme Alliot Marie had said that one of the RPR's priorities, if M. Chirac was asked to form a government, would be the abrogation of certain parts of the socialist reforms introduced by the socialist government in early 1984 under the guidance of M. Alain Savary.

She also said that the party was committed to providing universities with greater autonomy from direct state controls, a commitment which was formally endorsed in the party's joint programme with the centrist Union Démocratique des Français (UDF) and is now expected to become official government policy.



Premier Jacques Chirac: universities promised greater autonomy

'Experts' lose as assault on universities grows

Poland will become an "intellectual desert" within a few years, if the official policy towards science and scholarship is not changed, warns the unofficial Social Committee for Learning (SKN). This committee was established after the imposition of martial law in December 1981, to offer moral, and where possible financial, support to "independent" education initiatives. Its membership is secret, but it is believed to include some of the leading scholars in Poland.

The SKN's report on the state of science and learning was drawn up in connection with the official "Third Congress of Polish Science" originally planned for December 1983, but postponed until March 1986. Using official statistics which are, however, not normally accessible to the general public (this, in itself, suggests that some, at least, of the compilers hold high-ranking academic posts), the report presents a gloomy picture of official neglect, run-down and misunderstanding among the points it makes are that: ● It is not simply through a lack of resources and the economic crisis that the learned professions are deprived of their institutional autonomy and, as a result, have their intellectual autonomy restricted or even destroyed. This process reduces the ability of the learned professions to act as "regulators" of state policy, so that in the end even the government has no confidence in its own favoured "experts".

● "Academic freedom" under these circumstances is officially assumed to mean, at best, the free exchange of specialist information within the community of a given discipline. It does not include the freedom for the learned community to pass on such information to society at large, even in matters which are essential to the latter. In the long term, this "narrowly instrumental" approach to learning becomes counterproductive, even from the point of view of the authorities.

Reagan's 'small print' cuts to double students' bills

from William Norris

WASHINGTON A close look at President Reagan's latest budget proposals has brought the disquieting realization that proposed changes in the Guaranteed Student Loan scheme are going to double the cost of higher education for students.

The United States Student Association, currently lobbying Congress in a bid to have the administration's proposals thrown out, calculates that eliminating the in-school subsidy and requiring payment of the special allowance in the third year will mean that interest on the average \$9,660 borrowed over four years under the GSL programme will jump from \$4,240 to

\$8,303. This extra charge, of course, will only apply to those who are able to get loans. According to the American Council on Education, there will be many fewer such students in future. Even if the lending banks do not keep their threat to withdraw from the scheme, ACE estimates that 25 per cent of current borrowers will have their loans reduced or eliminated. Overall, the President's budget would cut grants and loans by \$2 billion in 1987, and drop more than a million students from all federal aid. The third year 1991, federal spending on student aid grants and guaranteed loans will have been slashed by 44 per cent.

Marxists urged to look West

by Geoffrey Parkins

A number of leading Chinese academics are urging Marxist philosophers, political and social scientists to study contemporary western theories, and instead of rejecting them, try to recognize and adapt what may be appropriate to China's current stage of development.

Zheng Hangsheng feels that the analytical methods of western philosophers and theorists in dealing with the problems of the modern world are of great interest and importance, and urges Chinese theorists to study them carefully. In philosophy, the possibilities of linguistic analysis and the philosophy of science, in particular, had much to offer, he said. Their study would benefit Chinese theorists by helping them to improve their own analytical ability, learn from the errors of western thinkers and become more aware of their own strengths and weaknesses.

While it was noted that in the past many Chinese academics had tended to regard western theoretical works uncritically, or to repudiate them altogether, it was hoped that a more objective approach, under the guidance of Marxism, would reinforce the influence of Chinese Marxism rather than weaken its impact.

According to Yan Jiaqi, the focus of theoretical studies in China has

ly reject western theories simply because they have as yet failed to solve questions satisfactorily, but recognize their "partial rationality", which may be appropriate to China's current stage of development.

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over the last nine years undergone a significant shift, and the work of social and political scientists today in many instances differs greatly from that of before 1978, when reform began. Since then, the Party Central Committee has successfully steered the direction of endeavour from class struggle to socialist modernization, and this in turn required a similar change of direction at the theoretical level.

The debate over the *external truth* of eight years ago, in which many still held that truth consisted in "whatever Chairman Mao has said", had argued rather than what was proved by practice had largely been won. Dogmatism and its expression in theoretical studies, together with "erroneous or simplistic interpretations of Marxism like 'class struggle have been ruthlessly criticized and rejected", said Yan.

With significant developments in Marxist theory, the importance of developing socialist democracy and the legal system, upholding the policies of opening China to the rest of the world, enlivening and reforming the domestic economy and developing the concept of China as one country with two systems, have been realized.

Food strike over stoning

from Wachira Kigitho

NAIROBI Students from the University of Nairobi main campus went without lunch for one day in order to raise £2,000 to offset hospital bills incurred by two women recently injured in a fracas near the hall of residence. Mrs Mumbi Mwangi, 26, and Miss Wanjiru Ikua, 16, were stoned by a group of students who had failed to be entertained by a local television comedy group. As the two women were passing through the hall, rowdy students threw rocks at their car and broke Mrs Mwangi's jaw. Miss Ikua suffered other injuries including a ruptured eardrum. Doctors at Nairobi Hospital confirmed that the woman would not lose her eyesight.

The lawlessness was immediately castigated by student union officials. The secretary, Mr Abedi Aduomosi, described the incident as cowardly and shameful to the university community. To demonstrate how the university community felt, the vice-chancellor, Professor Philip Mbiti, visited the girls over the unfortunate incident and presented the victims with cheques.

Meanwhile the minister for education, Jonathan Ng'eno, has urged a boycott of lectures this month and said he would meet their leaders at the end of the week.

Last orders for Iowa's alcoholic rodent elite

Tradition has it that the rats are the first to go. And so it is proving at the University of Northern Iowa. Not that the university is sinking. No. Not yet. But budget cuts have meant that some of the world's largest source of inbred rats have had to be made somewhere, and the axe has fallen on the rats.

There are no ordinary rodents. These are 1,800 of them, and some trace their lineage back for 50 years. On the Cedar Falls Campus of the university they live in the utmost luxury, in one of only four research laboratories in the world producing inbred rats whose breeding and genes have been carefully tracked.

Their keeper is Professor Gordon Harrington, who has been responsible for them for the past 24 years. Under his guidance, Northern Iowa has become the world's largest source of inbred rats for research in the central nervous system.

It is also the sole source of several other strains, including a tumour-bearing rat. Professor Harrington fears that many of these strains will go out of existence if the laboratory is closed down. Harrington's rats have been used for some odd purposes. They have provided information for breakthroughs on bias in standardized testing in the aptitude test, and they are currently being used to study the effect of changes in work shifts. In New York State, scientists are using them to

search for a possible link between high voltage power lines and birth defects. At the Iowa laboratory itself, where they live in a sterile environment totally free from disease, studies are being carried out on rats that are genetically alcoholic, and others that are apparently genetically non-alcoholic. "The drug companies think that if we can identify chemically what is happening in the alcoholic rat, it might be possible to get a pill to cure alcoholism," said Professor Harrington.

Many of these experiments will end when the Iowa laboratory closes, because the other three breeding centres – at Pittsburgh, Tokyo, and the US National Institute of Health – are unlikely to be able to cope with the demand.

Breeding them has been an expensive business. Their quarters, where music is piped in round-the-clock to protect them from outside noise, and three air conditioning systems, cost \$15 a rat a year, or \$225,000 a year. Running costs are \$200,000 a year.

But faced with a state-mandated budget cut of \$1.5 million, and a report of student enrolment, university officials ordered Harrington last December to stop the breeding programme on February 15. Unless they can find another home, the rats will be killed at the end of June when the laboratory is closed.



Sir John Burgin: 18 months to go

On queue for the hot seat

It is a measure of the success of the British Council in raising its public profile that applications for its directorate passed the previous total within a week of the first advertisements appearing. Hundreds of variously eminent hopefuls are queuing up for the £55,000-a-year post, which comes complete with first-class air ticket to all the most (and least) desirable locations and guaranteed headquarters for the duration of his or her term of office. Not that the successor to Sir John Burgin, who retires in 18 months, will necessarily come from among the ranks of the applicants. The selection committee, drawn entirely from the board of the council, will carry out an intensive search over the next two months much in the way that vice-chancellors are chosen. The intention is to announce the successful candidate in September or October.

In some ways, it will be the most important appointment ever made in the council. With a chairman, in the person of Sir David Orr, who is a relative newcomer and less familiar than some of his predecessors with the machinations of Whitehall, and a deputy director general who will retire even before Sir John, the choice will be crucial to the organization's fortunes.

His prospects are finally balanced, approving comments from ministers seldom being matched when budgets are drawn up. However, its stock was sufficiently high for it to be the natural and popular choice to administer the funds previously spent on membership of Unesco.

Much of the credit for that must go to Sir John, a less than popular choice as director general six years ago. Coming from the Department of Trade and Industry with a previous association with the think tank, which had recommended the virtual abandonment of the council, he was regarded with great suspicion. He arrived with great suspicion, a humourless introvert, likely to bring the axe freely with little regard for the traditional character of the organization.

The character of the council undoubtedly has changed during his term of office, but the new emphasis on efficiency and profit-making activities has won admirers in government and probably prevented its downfall. At the same time, Sir John's shortcomings as a communicator have been overcome through a determined expansion of the council's public relations effort.

The nominee has to be approved by the Foreign Secretary and, given the nature of the post and her interest in the council's affairs, there is little doubt that the Prime Minister will be consulted. The favourite among council staff is Sir Crispin Tickell, permanent secretary at the Overseas Development Administration, but a number of vice-chancellors, including Dr Adam Neville and Professor John M. Duncan, are also spoken of as possible successors to Sir John.

John O'Leary

Secrets in the backroom of evolution's storehouse

by David Jobbins

Those awesome dinosaurs and majestic whales which greet the three million people who visit South Kensington's Natural History Museum each year seem some of the few fixed points in a rapidly-changing world.

Generations of schoolchildren have wandered at the public exhibitions, many of them able to identify a lasting interest in natural history from that first glimpse of the diversity of life.

Darwin's theories, themselves the product of man's wonder as he probed the outer edges of his environment, are replicated in the almost imperceptible rate of change in the public galleries.

In its prime role as one of the world's most prestigious research institutes into the science of taxonomy, the museum has roots firmly planted in the traditions of the great Victorian collections. The British Museum (Natural History) to use its full title, houses some 65 million specimens of life forms and minerals, many forming part of a reference collection providing the raw material for identification and the constant revision of scientific classification.

The museum's national reference collection of insects, for example, contains 12 million named specimens, representing more than half the 900,000 described species. A further 12 million specimens are in the process of being prepared, identified and incorporated into the system.

If this makes the museum seem a somewhat sterile linear descendant of pedantic Victorian taxonomy, nothing could be further from the truth. For the museum is a world leader in the discipline, rivalled only by Washington's Smithsonian.

And of all the life sciences taxonomy is the most fundamental, drawn up by zoology, botany, medicine, agriculture, forestry and environmental conservation.

Every day some 115 people visit the museum's scientific departments, half of them from abroad. They include academics seeking advice and guidance for their own research, scientists working for government departments at home and abroad with practical questions about the identity and habits of living organisms, and from non-governmental and international organizations.

The museum's activities are separated into basic and strategic research on the one hand and advisory services on the other. Thousands of specimens are made available to researchers on a loan basis each year.

So far all this has been free, at least to institutions with a reciprocal arrangement with the museum.

But eminence and success are not sufficient protectors against the cold economic wind blowing through 1980's Britain. Like many other prestigious institutions, the museum is faced with a programme of activity which it is unable to support from its anticipated income.



Uniquely among Britain's museums, the Natural History Museum receives its central government funding through the Science Vote, on the recommendation of the Advisory Board for the ABRC Councils. On the basis of the ABRC's recommendations, government funds, which comprise about 88 per cent of total income, will not exceed £11.5 million in each year until 1990-91. The effect is a shortfall between income and programmed spending, after alternative sources of income and the effect of inflation are taken into account, rising to almost £2.7 million a year by 1991.

A 2 per cent cut in running expenses and a further loss of jobs, hopefully through natural wastage, will only yield £24 million, which a higher marketing profile for the museum's publications and expertise, and a sponsorship drive will bring the "savings" to about £1 million, still leaving a gap of £1.7 million.

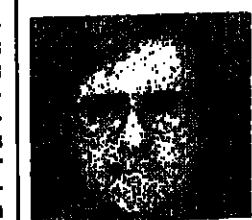
Of course hard financial times are not new. The museum's last two annual reports covering the period 1978-83, dwell on policy decisions being taken at that time.

An "equal misery" distribution of economies was decided upon at the outset to maintain the 80/20 per cent share of resources devoted to scientific curation and research on the one hand and the rest to education and public exhibitions. Short-term contracts for museum staff were introduced as a "precautionary measure" in 1982 and the following year 12 jobs were axed to stay within cash limits.

But these were essentially short-term decisions taken in the belief that the storm might abate. It didn't, and now the museum authorities have been forced to come to terms with a long-term reduction in central government funding. With the shortfall so large, and the museum's scientific and educational objectives admitted to be in jeopardy, drastic solutions were needed.

The first step was the announcement by the museum trustees last month that the public will be charged admission to the galleries for the first time since the museum opened its doors in 1881 from April next year. This decision, controversial in itself, could be only the first step in the museum's battle to maintain its activities.

America's biggest Scotch importer



Not many Scottish studies specialists would have the bravado to launch a major campaign with the title "John Knox and Robert Burns: The Odd Couple."

Admittedly, Professor Charles Hays (left) is based in the United States where such razzmatazz raises fewer eyebrows, but even his fellow American academics regard him as something of a human cyclone.

Professor Hays, Scotophile extraordinaire, is director of the Institute of Scottish Studies at Old Dominion University in Virginia, which next week holds its 15th annual conference, this year with the more restrained title "James VI of Scotland".

Professor Hays has built up what is considered the showcase of the Institute, arousing considerable international academic interest. He has brought noted Scottish scholars such as Professor Rosalind Mitchison, Professor T. C. Smout, Professor A. A. Duncan, and Professor Gordon Donaldson to the peak at Virginia. But he has broadened the appeal beyond the academic by enticing people from the theatrical, musical and business world as well,

Perhaps the authorities benefited from being towards the end of the admission charges line, with much of the attention still being grabbed by their neighbours in the Victoria and Albert. But other steps, which may still be needed if the income from charges is insufficient, includes charging for scientific services even with institutions with which the museum currently has reciprocal arrangements.

Some of the museum's 335 scientific staff are deeply worried that the search for a more market-oriented approach to the museum's services and the quest for more commissioned research may distort a research programme which has evolved in response to normal scientific pressures and free choice of lines of inquiry.

They believe that the danger remains that the adoption of any cost/benefit analysis of activities will favour short-term projects with easily quantifiable results at the expense of long-term investigations which though embarked upon for purely academic reasons may yield immeasurably valuable results in the future.

The museum authorities are adamant that they do not foresee the scientific departments turning over wholesale to short-term commissioned research. Director Dr Ronald Hedley says: "It would be wrong to say we are changing track. We have always had to be selective. Traditionally we have engaged in associated research areas of greatest relevance to agriculture, medicine or the environment. In the last 10 years we have had to respond more precisely to the requirements of the research councils and universities."

The taxonomy of birds, mammals and other vertebrates is well known, and the most dramatic shift in policy has been to acknowledge this by placing collections already in a good state of repair and documentation on the back burner to concentrate on areas of invertebrate taxonomy which

Away from the public galleries (above) most of the work is pure scientific research

are still on the margins of knowledge. Perhaps the most formidable difficulties, but also the greatest potential gains are faced by scientists in the entomology department. The total number of insect species is unknown but probably exceeds 10 million. Many are pests, and almost all are subject to environmental and geographical variations which make classification a real challenge.

Many of the most varied are pest species including aphids and noctuid moths – but precise identification is essential to establishing the correct biological control for cost-effective elimination.

In the plant world, too, research has brought important and practical spin-offs. Certain species of lichen are better equipped to tolerate sulphur dioxide pollution than others, and identification of the mix of species present can give a reliable indication of pollution levels, a method already used in planning inquiries when environmental questions were raised.

Lichens also provide information on radioactive fall out, acid rain pollution, and can give a clue to the presence of metals in the earth.

Research at the museum into the taxonomy of fishes has also had vital but unforeseen practical value. A project begun by Dr Philip Whitehead 30 years ago into the taxonomy of the herring family, purely motivated by the spirit of scientific inquiry, has led to publication of a field guide for use at sea by the fishing industry.

Dr Whitehead is not seduced from the straight path of scientific inquiry by purely commercial considerations. "Taxonomy is not an applied science," he says. "But only in its application does it finally justify the time and work spent on it."

The museum, a repository for much valuable historical material, dating back to the voyages of the great explorers, would undoubtedly applaud his remarks.

He has also won considerable support for the scheme from the British Council, which plans to provide a small library for each of the new centres, as well as helping to bring speakers to their opening conferences.

"There's a tremendous interest in all things Scottish, and all I'm doing is focusing it. It's a viable ethnic study – there are Japanese, Chinese, Polish, Irish studies, so why not Scottish? And there's a general consensus that it's long overdue."

Long overdue it may be, but Professor Hays and his colleagues are breaking the speed limit in catching up.

Olga Wojtas

The talent lost between two poles

Polarization of the vocational and non-vocational faculties within continuing education is a trend becoming of increasing concern to the Department of Education and Science.

Since the inception of its acclaimed PICKUP programme of updating and training courses several years ago, the DES has become acutely aware of the deepening divide between the two forms of provision.

Within the DES further and higher education area, both the vocational elements as embodied in PICKUP and the more general forms of adult education including extramural provision and the Open University, fall within the branch headed by permanent under-secretary Mr Noel Thompson.

The DES view is that both types of provision should ultimately form part of a vast spectrum of continuing education, encompassing at one end basic skills such as literacy, and postgraduate studies at the opposite end.

Currently special concern is being voiced about the degree of polarization taking place within many universities where PICKUP and other forms of vocational education are sited in various departments, while extramural activities remain a separate entity.

There is support for moves towards the model of community education adopted by many American institutions, which have established a central administrative unit for continuing education incorporating marketing and promotional strategies. Comparisons have been drawn between the large numbers of adults - up to 30 per cent in some instances - on American university campuses, and the much lower figures for their British counterparts.

While setting no target for British institutions the Government in its recent Green Paper made it clear that it accepted continuing education as a major growth area for the future.

Part of the DES concern over the split between adult general education and vocational elements of the system stems from the belief that untapped talent is lying dormant in the adult population, skills which might be used to aid the country both economically and socially.

There is also growing recognition that some of the personal development techniques employed in the teaching of general adult education will be needed in vocational courses to realize the full potential of employees.

The DES is acutely aware of the long-term need to create a coherent and more flexible system of access for mature students, which might be developed as a national network; and of the accompanying demand for suitable educational guidance and counselling to ensure a low drop-out rate among adult returners.

From the DES point of view the most pressing immediate need is for greater collaboration between the many adult education staff involved in various access schemes.

At the same time the department is aware that to bring about radical change in the profile of continuing education in both public and university sectors will require a realignment of present funding arrangements.

Ministers are known to have been uneasy for some time about the largely historical arrangement for funding the extramural departments of universities through recognition of the responsible body status.

Critics of the system have pointed out that it excludes approximately one third of universities, and totally ignores the growing amount of continuing education provision made by public sector institutions. Initiatives such as PICKUP are now only serving to emphasize the divide between the two spheres of adult education.

While recognizing the need for change in this particular area, the DES is not anxious to reveal its thinking on this issue at present.

Continuing education occupies an increasingly important position as institutions demands placed on them. *The THES* has conducted a major survey on the of Education and Science, universities, polytechnics and industry.

New strategies - but few resources

Continuing education is beginning to be perceived as a major part of provision in the university sector. The injection of pump-priming PICKUP money for vocational activities has spurred on the trend, and many institutions have used the opportunity to look more broadly at their current provision.

To discover what attempts universities had made to implement new strategies for continuing education in the wake of the 1984 University Grants Committee report on the issue, *The THES* despatched a questionnaire to all institutions in England and Wales. In quizzing each university, the survey enquired about resources committed to continuing education; efforts made to improve liaison with industry and the community; and innovative features of provision. It also set out to assess what attempts institutions had made to encourage greater involvement of academic staff in continuing education.

Some institutions had already acknowledged and responded to the need for change, before the establishment of the UGC working party on the issue. Aston, for example, created its centre for extension education in 1982 - the year that the working party began its investigation.

Others have only begun to re-examine their provision more recently. Exeter is poised to embark on new initiatives once its new director of continuing education is appointed in the autumn.

Though activity in many instances has been spread unevenly among departments and not necessarily centralized or co-ordinated from within the existing adult education administration, there has been a realization in many institutions that adult education departments do possess an expertise in the area which should not go untapped.

And to prevent a widening of the gap between adult liberal education and more vocational programmes, some institutions have begun to assemble all continuing education provision under one central administrative department.

While the emphasis on vocational provision has led to fears in some quarters of a demise of traditional extramural studies, *The THES* survey tended to indicate the emergence of an opposite effect. In institutions where a new interest had been taken in vocational aspects of continuing education, this has helped to focus attention on the broader areas of provision.

Where innovative action had been

taken to attract mature students into vocational courses through marketing and more flexible administrative procedures, the implications for university adult education generally were not going unnoticed.

But it was accepted work in this direction would continue at a slow pace, hampered by severe restraints on financing schemes. Several institutions made the point that just a little additional cash in the form of pump-priming would go some way to alleviating the situation and encourage growth in the community education sector, to match similar developments which had taken place in vocational education.

The survey also highlighted the disparity in provision of continuing education which resulted from the continuation of the responsible body funding system for extramural departments.

Pump-priming was declared extremely valuable, despite complaints about the paucity of awards

However, in some cases, there had been a determined effort to attract mature students despite problems concerning funding. An obvious example was provided by Lancaster which, without responsible body status, had managed the admission of large numbers of full-time mature students, and the introduction of part-time first degree and postgraduate work.

On resources currently allocated to continuing education it proved impossible for many institutions to isolate and define overall expenditure. A large number of institutions stressed that much of the work, according to government instruction, was of a self-financing nature, although several mentioned that a small amount of income from such sources was now being fed back into the system to aid poor or resourced areas of adult provision.

Pump-priming was declared extremely valuable, despite complaints about the paucity of awards - especially when combined with exhortations to institutions to make major provision for continuing education. A feeling which was aptly summed up in the response from one institution which declared: "More money available for pump-priming would obviously help the organization and provision of courses. More importantly, it would

indicate a serious national commitment to an area where encouragement has not so far been backed by material support."

Marketing for many institutions remained a weak chain in the structure. Though universities had become increasingly well aware of the importance of a strong marketing policy both in vocational and community education, many were finding lack of resources a serious impediment to growth in this vital area.

Institutions which had adopted marketing strategies had implemented a variety of devices for involving industry and the community.

One initiative, undertaken at Durham, has been the development by the university's business school of a senior common room approach, whereby representatives from a host of commercial and industrial interests have been invited to participate in events, and encouraged to bring other guests on to campus to join in.

Hull has utilized a secondment scheme to secure the services of an industrial and commercial liaison officer with valuable inside knowledge of the industrial environment; while Leicester makes use of a computerized mailing system, and is in the process of harnessing the service to stimulate demand for technical services and consultancy work, both to firms locally and nationally.

Facing the problem that almost all firms in its area employ fewer than 1,000 staff, Sussex with assistance from the PICKUP fund has established a small firms unit to liaise with companies and examine how the university can best offer support.

A number of devices have been adopted by institutions in order to make provision more flexible, and therefore far more accessible to adult students. The survey revealed a degree of modularization of courses at almost every institution canvassed, though some had progressed a good deal further than others.

Most were also providing some form of access opportunities, or had developed links with other further and adult education agencies who undertook this function. Work on credit transfer arrangements also seemed to be progressing at a brisk pace, both within a local framework, and with other higher education institutions.

Open learning was revealed as a mode of delivery currently attracting a lot of attention. Schools of London University are actively engaged in preparation of video materials and computer programs to accompany

courses; Aston has a system of video recording of lectures based on an American scheme at Stanford, which are hired out for off-campus use; industry and commerce; Sullivan has been to take the campus workplace via its mobile education centres.

Some institutions with widely dispersed populations have attempted, not always successfully, to make distance learning for use in the community. Kent had considered a scheme, but pointed out: "Creative software is expensive, and there is only recuperable with a considerable degree of use."

The University College of Wales Aberystwyth, however, has managed to establish a unique distance learning project - an external BA degree scheme delivered entirely in Wales. Established to meet the need for

Open learning was revealed as a mode of delivery currently attracting a lot of attention

Welsh equivalent to the Open University undergraduate programme, the scheme is currently being undertaken by 32 students.

Statistics for academics in full-time posts currently engaged in continuing education work proved elusive. Some institutions were unable to make such a calculation.

Among those which did provide a figure, the amount ranged from 7 per cent to 50 per cent of an institution which included its own service teacher education programme in the total. In most institutions able to provide a sum, involvement by academic staff appeared to be about the 25 per cent level, with acceptance that more needed to be done in this sphere.

There was also growing recognition of the importance of staff development, to take account of the special learning needs of adults, especially in the vocational sector. In acknowledging the need, Southampton was just one of several institutions which pointed out: "The amount of staff development work that can be undertaken is currently limited by lack of resources."

Inevitably, the general issue of resources hampering significant continuing education development was a recurring theme in the responses.

First steps out of the academic wilderness

ties currently enjoy responsible body status and therefore grant aid from the DES. But well before the University Grants Committee established its working party on continuing education and recommended a review of the system, it was being recognized within universities that its days were numbered.

The award of such status at Warwick, coming in the face of stiff opposition from Birmingham which sought to retain its overall control of provision in the West Midlands, and coinciding with the UGC pronouncement urging a more positive stance on continuing education, was seen as a DES attempt to alter the pattern of extramural studies, and set a precedent for other institutions to follow.

Warwick itself was anxious at the outset to promote the impression that lines advocated by the UGC - which would seek to introduce continuing education into the mainstream of academic activity - use innovative methods and materials to attract a breed of mature students; and encourage far greater involvement by academic staff in the presentation of programmes.

How far the university has yet succeeded in these ambitions is still an academic question, according to the DES. More recently, however, the university's new continuing education department, Professor Charles Duke arrived at Warwick in September last year armed with an impeccable record in the field of adult education. A

Cambridge history graduate, he spent three years on the staff of the adult education department at Leeds - a bastion of redbrick extramural provision which also enjoys a reputation for innovative research and development - before being recruited as a 16-year stint as director of continuing education at the Australian National University.

After only a few months in his new post, Professor Duke feels it is far too early to make any concrete statements on Warwick's ability to bring adult education in from the academic wilderness and award it a more central role in its life. But to date he is happy with progress achieved - including the fact, though not totally unselfish interest by follow academics, coupled with a determined attempt by the university's administrators to promote continuing education issues through the establishment of working parties and standing committees.

The next five years, he anticipates, will be crucial - not only to Warwick, but for continuing education on a national scale. Higher education will have to decide whether to make a genuine commitment to mature students on a grand scale, or to stand by and let the system enter a period of decline as the numbers of 18-year-old students dwindle.

And it will not be sufficient, Professor Duke argues, to merely transpose adults for post-school education systems. The entire higher education system must take radical measures to accommodate such students, and equip them to meet the new challenges of a rapidly changing

technological society.

Among the mechanisms going into place at Warwick to strengthen the position of continuing education within the university structure is a scheme of internal secondments. Because of internal uncertainty over a newly-titled body for responsible body status, the university has decided to make only two further full-time academic appointments at present. To bolster them, the university is planning to fill the two further posts allocated from a succession of internal secondments, intended to give academic staff outside continuing education an insight into the issues involved.

Warwick has already links with other providers, and with its three local education authorities through a central forum which meets on a termly basis. This body is a mirror image of the Coventry Consortium, which organizes short courses in updating and retraining for local industrial and service groups are chaired by the vice-chancellor and include representatives from other institutions, including Coventry Polytechnic's director. The forum has its consortium counterpart, but its useful in forming a point of contact between the academic and non-academic spheres, and disseminating through the system.

The structure used by the Coventry Consortium has proved of immense value in promoting greater institutional collaboration. It has also been a catalyst for a shared policy between all

grapple with a changing ideology and issue, involving the Department Report by Maggie Richards.

An open invitation to the community

Polytechnics, because of the nature of their work, have always been at the forefront of continuing education - an initial point stressed quite forcefully by a number of institutions in their response to *The THES* survey of current provision.

Just how strong the public sector connections with continuing education have become was revealed in the large numbers of students enrolled on such studies - albeit still largely vocational - in polytechnics.

Accepting as their definition of continuing education the NAB description, "Any form of education undertaken after an interval following the end of initial education", institutions able to pinpoint continuing education students reported involvement ranging from 30 per cent to 56 per cent of the student population.

Though much of this work has been heavily biased towards vocational offerings, increasingly polytechnics reported that they are focusing on broad provision for the community - with programmes for women and the unemployed receiving particular attention.

From replies to the survey it was clear many institutions had identified the priority areas now as: access, marketing, and more flexible provision (including credit transfer).

To encourage greater participation by adults many institutions have already seized the opportunity to open up their existing provision to these new students, by increasing modularization of both full-time and part-time

courses, with students being accorded "associate student" status and so able to attend courses without the necessity of obtaining formal qualifications or undergoing stringent entry procedures.

North London Polytechnic now boasts the largest evening degree scheme within the public sector which has been specifically designed for mature students. Within a modular system students undertake 20 units, each of 50 hours duration, and generally study at the rate of two evenings a week spread over five years. The scheme is an integral part of the polytechnic's continuing education and community access centre, formed in response to the NAB report, which is headed by an assistant director and operates as the sixth faculty of the institution.

Sunderland too had acted recently to centralize its continuing education provision. The polytechnic has concentrated on expanding access through a series of programmes housed in its new centre for continuing education. Located in the town centre, the new unit operates in an outreach capacity for both community and vocational activities, in conjunction with further education providers and the local education authority.

Other institutions have explored the possibility of a "walk-in" facility for prospective students, including Thames, which offers access opportunities from drop-in centres and also uses a mobile advice unit to tour six sites on a regular basis.

In attempting to widen access many polytechnics have made strenuous efforts to develop links with other institutions in the non-advanced sector, establishing networks to facilitate collaborative arrangements with further and adult education providers.

Leicester has advanced to the stage of adopting a unified policy between all

its major education providers, including the polytechnic and the university. Positive steps have been taken by many institutions to establish marketing strategies for continuing education, usually under the control of an assistant director of external affairs, and in some instances backed by the appointment of a press and public relations officer.

In the case of Birmingham, an enterprise unit has also been established to promote activities with the long-term aim of attracting sufficient funding to divert some resources into special needs provision.

Leicester has taken the idea of the business lunch, and extended it into the business seminar. So far the approach has been extremely successful, persuading firms of the value of management training and leading directly to the provision by the polytechnic of its MBA course on a part-time basis.

The institution was also one of several which had utilized local radio to get its message across. Thames had managed to secure a one-day phone-in facility to offer general advice on continuing education opportunities.

Several institutions reported initiatives involving the use of distance learning. And in institutions such as Bristol, which had become involved in a major Open Tech programme, staff had become aware of the implications of open learning systems in other areas of the institution's work.

Bristol reported: "A considerable degree of commitment to, and involvement with distance learning development, therefore exists within the polytechnic, even though it may not be said to be evenly spread throughout the institution. There is no doubt that a greater investment of funds for the release of staff time to develop distance learning material in proven cases of need and suitability would speed up such course development."

Virtually all institutions found it impossible to quantify numbers or percentages of staff involved in continuing education, but in many it was estimated to be over 50 per cent.

In most instances institutions already included an element of continuing education staff development as part of their in-service training arrangements. But many were beginning to recognize the need for much more specific programmes of training.

Outside the polytechnic realm, many other higher education institutions have been taking a keen interest in the further development of continuing education. Although the number of survey returns was smaller than for polytechnics and universities, those colleges which did respond demonstrated a heightened awareness of the needs of continuing education students.

Since consideration of the NAB document, institutions had organized working parties to examine their current offerings. In many instances colleges were already catering for large numbers of mature students, but without making specific provision for them.

Where these committees had completed their deliberations a senior member of staff had been appointed to spearhead further development. In several cases this had also been supported by the appointment of an additional member of staff to consider marketing possibilities.

Like their university and polytechnic counterparts, many institutions found it impossible to identify spending on continuing education, but it was recognized as the major growth area for the future. One institution stated: "It is our view that further expansion into the continuing education market is a more legitimate use of resources than an uneasy battle for the diminishing pool of 18-plus entrants."

Recognizing the need to make further inroads into the community, particularly for women, the unemployed and in some instances the elderly, many colleges were putting particular emphasis on access arrangements. Some had developed links across higher and further education.



Class of '13-14. Male typists at City of London College (now the Polytechnic) just before the outbreak of the Great War.

Business as usual - for 138 years

The origins of the City of London Polytechnic date back to 1848, which was also the year it enrolled its first continuing education students. It has been in the business of adult education ever since.

With approximately 12,000 part-time students enrolled at any one time, the polytechnic claims to have more students in this category than any other institution in the country. This factor, plus the high percentage of adults registered on full-time degree programmes and the establishment of a special updating unit which has been in operation since 1977, put City very much to the forefront of current public sector continuing education provision.

Three major strands make up the main components of City's continuing education provision: a full-time modular degree scheme; part-time (mainly day and evening) vocational classes; and updating courses - the responsibility of the special unit.

The nine buildings which comprise the polytechnic are sprinkled about the City of London. With an institution so centrally situated for the capital's business and commercial heart, it is not surprising the polytechnic is confident about the future, with its already large numbers of students destined to rise still further.

Because of its prime location there is also no lack of post-school applicants for full-time courses. Indeed, City's provost, Mr Michael Edwards admits to being "positively embarrassed" by demand in this direction. Although, therefore, not threatened by demographic trends, City is determined to enhance its continuing education provision.

One reason is that the provost, coming to his present appointment five years ago from a career in industry, recognizes the influence mature students can bring to bear on their younger counterparts and the institution as a whole.

Already the adults who make up 20 per cent of the students undertaking the polytechnic's modular degree scheme have had an impact in terms of their dedication to study, and their practical experience of work.

The ratio of mature to post-school students within the scheme is now about right, Mr Edwards judges. Any further influx might tilt the balance too much.

So, instead, City is now looking at the possibility of modularizing some of its named degrees, which form about 60 per cent of the polytechnic's undergraduate provision at present. This, it is envisaged, would widen opportunities for mature students, particularly for those wanting to study in business or professional areas.

In one instance, the polytechnic would like to completely alter the profile of one of its most successful specific degrees: the Business Studies BA, to accommodate mature students. The plan involves allowing adult entrants with appropriate industrial or commercial experience exemption from the two six-month work placements, currently essential

features of the course. Suitable mature candidates would be enrolled a year ahead of their intended participation, and during the ensuing 12 months their performance at work would be supervised and assessed in a similar way to the existing sandwich elements for younger undergraduates.

Mature students would then go on to complete two four-term years - the course would allow for shortened vacation periods.

So far informal talks on the proposition with her Majesty's Inspectorate and the Council for National Academic Awards have yielded a "quite enthusiastic" response.

Mr Edwards feels that such a programme might win favour among academic staff if administered on a voluntary basis: "We would be able to offer existing or new staff a range of choices. They could teach three terms, or four terms for additional pay. Alternatively, they could opt for a two-term year, which might appeal to some older staff or those wanting to undertake consultancy work."

While City is aware there will be no lack of demand for its provision, it is anxious to expand growth in one particular area. Having devoted some time and energy to developing access links with further education institutions in London's East End, the polytechnic is keen to strengthen links with the locality and to exploit what is thought to be a huge potential.

Explained Mr Edwards: "We know the proportion of 16-year-olds moving on to tertiary education in Hackney and Tower Hamlets is the lowest in the country. We acknowledge this statistic has nothing to do with ability. It is caused by social factors."

"We believe, and have some experience to bear it out, that numbers of these people after being in jobs for a while will recognize they have a need for higher education, which they did not realize at 16. If we are to continue to serve our local community, which we are very keen to do, we will have to make additional provision for these people who missed their initial opportunities."

Apart from tackling the problems of access for mature students from both the commercial and the community spheres, the polytechnic has for over a decade recognized the growing emphasis on updating and retraining.

Originally responsibility for this area within the institution rested with various departments, but it was recognized that the approach was fragmented and imposed a heavy administrative burden on teaching staff. Accordingly, in 1977, the work was centralized into a special short courses unit, which currently employs three staff and co-ordinates administrative arrangements and promotion of programmes.

Pre-empting the DES PICKUP programme by a number of years, the unit is self-financing and has supplied annual surpluses to the parent institution though hampered by lack of resources.

Industry's war on two fronts

What industry requires of higher education in general, and continuing education in particular, is well documented, according to the Confederation of British Industry, in its recent Green Paper response.

In broad terms, the CBI is concentrating on what it feels to be the major failures of the present structure: over-specialization beginning in the schools and continuing through to graduate level; an obsession with acquisition of paper qualifications at the expense of proper development of personal skills - judged to be of better use to industry; and an over-enthusiastic pursuit of academic excellence for the top 10 per cent of studies (to form the next generation of academics) at the expense of the remaining 90 per cent, many of whom will be seeking careers in commerce, industry, the professions and the public sector.

The CBI is critical of the pace at which change occurs within higher education, especially in the university sector. Scientific and technological advance is taking place at such a rapid rate that companies are altering their plans from month to month, yet in many instances educational change evolves only over several years.

To meet the new demands of rapid technological progress, the CBI wants urgent attention given to developments in continuing education on two fronts: the updating and retraining of graduate employees, and the wider provision of upgrading studies for mature students.

Courses in both categories, says the CBI, should be designed on a modular basis so that they, in turn, can be revised and updated quickly and efficiently.

Acknowledging some institutions are now making strenuous efforts to meet these requirements, the CBI urges many more to contribute - or run the risk that the growing demand will be met from outside the higher education sphere.

The CBI's own education staff have been monitoring the development of updating courses. They report provision in this field is still "patchy", and are keen to see more collaborative efforts between various institutions, such as the link up at Coventry involving both the city's university and polytechnic.

Such initiatives are of special value when they incorporate a central advisory unit. Many companies, have in the past been confused by the vast array of courses arranged by individual institutions, or by departments within institutions.

The solution, the CBI contends, must be some form of local initiative which can respond to grassroots needs, bringing together industrialists and institutions to discuss their own requirements, without the interference of government or national agencies.

Faults which exist in the current system are not judged to be the total responsibility of the educational sector. The CBI is aware of weaknesses within industry, especially among smaller companies, and of the lack of a firm commitment to training on the part of some enterprises.

It is accepted that industry's present disinterest in training issues stems partly from a hefty pruning of specialists in the field during the 1970s. One early effect of the recession was a rundown, even among larger companies, of education and training personnel. This loss is now being widely felt.

Mr Henry Tomlinson, from the CBI's education department, believes industries could now examine the possibility of making education and training liaison the responsibility of technical and production departments within firms.

Though the system might not be workable in smaller companies where the managing director is likely to assume sole control, Mr Tomlinson is convinced such structures in larger organizations would assist in making training directly relevant to the needs of the individual company, and help emphasize the more central role training might come to play in each firm's development.

Regardless of where training expertise is sited, the CBI feels the key to improved communication between industry and education must lie in the use of efficient marketing strategies by the higher education sector.

Harold Silver



The CNA: an opportunity for public demonstration?

"The Government welcomes" - not the most common of phrases these days - "The Government welcomes the changes that the Council for National Academic Awards are making in response to the work of the Lindop committee" - a welcome, perhaps even a historic sentence. The Secretary of State appears to have mediated long on validation of public sector higher education, and may be in the unusual position of hearing some applause. Not from all polytechnic quarters, where some aspirations were higher than the CNA or Sir Keith could reach. But from the CNA constituency broadly, I suspect. The CNA has been moving rapidly towards extending the responsibility of its associated institutions for their own courses. There are changes, there will be more, the Government welcomes. Twenty-one this year, the CNA makes its history.

It inherited the mantle of the National Council for Technological Awards and its Diploma in Technology. I taught on the Dip Tech and felt myself part of a band operating on a frontier where only pioneers dared. The CNA, given its task of setting standards in public sector institutions equivalent to those of the universities (whatever they were), fumbled its way towards acceptable definitions of the style and content of its degrees. It emphasized sandwich courses, part-time degrees and access for mature students. Within two years it was calling for a flexible approach to courses, including "a broader study of science or technology" or studies which covered a combination of the two with the social sciences. Like the NCTA before it the council required its degrees to contain "complementary or contrasting studies", but by the end of the 1960s was withdrawing such requirements. It was increasingly for the polytechnics, and then the colleges, to propose the content of their courses, and for the CNA to worry about the standard.

If we worried about the historian's hindsight none of us would venture a public opinion. Sir Peter Venables, alas, got the CNA wrong. Indefatigable portraitist and analyst of technical education and all that surrounded it, he thought in the *Universities Quarterly* in 1965 that the colleges ought to be working with their local universities, "rather than in isolation under the remote CNA". I cannot, 20 years later, and after working under and with the CNA for eight of them, begin to feel isolated or see it as remote. Venables was disturbed that the CNA - contrary to what the university people involved in its planning had envisaged - was producing a "quasi-university system" with the absurd possibility that some 55 technical colleges then offering degrees would end up under its umbrella: "If the CNA were to recognize courses in such a wide variety of colleges, it may seriously be doubted whether the courses and the education provided could really be comparable with that provided in the universities." The current directory of highly education courses lists 110 institutions which such CNA "recognition" in Britain. As of that directory going to press he was doubly wrong, exactly so.

There were those who thought that the CNA would serve as a sub-university system, merely catching the fall-out, and not attempting to establish a "separate" system - but perhaps occasionally allowing an aspirant to be

Chiefs on the warpath

John Sizer on the post-Jarratt bid for efficiency expected of vice chancellors

Calls from the Government and in the Jarratt report for greater effectiveness and efficiency, and also for the recognition of vice chancellors not only as academic leaders but also as chief executives, are regarded as threats to academic freedom, particularly if expressed in what some would regard as offensive managerial language. Nevertheless, professional management expertise, as well as academic ability and leadership qualities, will be essential if institutional autonomy and consensus styles of decision-making are to be preserved.

Should academics concerned about threats to research, scholarship and academic freedom recognize that the more effectively and efficiently the sources are used, the greater the freedom of institutions to develop and implement their own academic plans? Higher education will need, as the Green Paper emphasizes, to be responsive to the changing demands of a post-industrial, advanced information and manufacturing technology society. The major institutional managerial challenge is, and will continue to be, how to maintain the vitality, responsiveness and creativity of faculty when many of the pressures are working in the opposite direction, including the prospect of continuing decline in real resources, ageing faculty, diminished career prospects, declining real salaries, and little new blood. Despite these pressures the Government considers the challenge is to manage not for survival, but for relevance and excellence.

All the signs indicate that, regardless of political party in power, pressure on institutions to justify their use of resources and account for their use of resources is likely to be sustained. Within institutions planning, resource allocation and accountability will need to be linked in the way envisaged in the Jarratt report. Managements will require a sound basis upon which to arrive at and justify such decisions to internal constituencies that are suspicious and concerned about threats not just to scholarship and academic freedom but also to their continued existence.

In particular, they need to develop methods for allocating resources which provide for the selective allocation of research funds, and for assessing the performance of the component parts of their institutions. There will be calls (witness the Jarratt report) for greater accountability by heads of academic departments for the use of resources allocated to them, and for the introduction or strengthening of procedures for staff development, appraisal, and accountability. Inevitably there will be a continuing demand for performance indicators, which will aid these processes, and for relevant financial, qualitative and quantitative information for planning, decision-making and control. All of this will be perceived by many academics as threatening.

Within institutions the pressure for increased efficiency in the short term will have to be balanced with actions that need to be taken if institutions are to be effective in results achieved in the long term. In this respect it is important to recognize the dangers of pressures for short-term efficiency crowding out long-term effectiveness. Teaching,

research and scholarship should be concerned with long-term effectiveness. The Green Paper is also concerned with long-term effectiveness, contributing to the improvement of the performance of the economy; matching competition in producing more qualified scientists, engineers, technologists and technicians, developing the ability to adapt to change, etc.

While it is reasonable to expect the Government to have, and to enunciate, broad policies, strategies and guidelines, it is less realistic to expect a longer term funding horizon which does not carry with it a considerable degree of uncertainty. If long-term effectiveness is the primary measure of performance, such uncertainties should not excuse the need to examine the impact of long term trends on an institution's portfolio of activities and to develop a strategy for its long-term development, which is responsive to those trends.

Under conditions of financial constraint and changing priorities such requests for strategic plans will be seen as a further threat to academic freedom. Thus the Jarratt report recommends that councils, which contain a majority of lay members, should assert their responsibilities in governing their institutions; notably in respect of strategic plans to underpin academic decisions and structures which bring planning, resource allocation and accountability together into one corporate process linking academic, financial and physical aspects.

It may well be that a degree of tension between these two necessary and desirable functions can be creative and beneficial in the long term. Not surprisingly, many academics are suspicious and wary of Jarratt's recommendations, and others may be sceptical as to whether lay members of appropriate quality are willing to enter the fray. Having active lay members will not compensate for an ineffective vice chancellor.

Decentralized structures require institutions critically to study and evaluate themselves; if they are to preserve their autonomy and academic freedom universities have to find internal solutions to retrenchment and redeployment. While developing and applying criteria for the evaluation of subject areas and research programmes is a first stage in self-evaluation, this only provides a starting point from which difficult managerial judgements have to be made.

The fewer the criteria the greater the gap that has to be bridged by such judgements. No matter how sophisticated and detailed the analysis, the gap will remain a substantial one and the nature difficult and complex. This is particularly true in the area of research performance evaluation. How do you compare the research performance of an economics department with that of a physics department?

A serious risk under the conditions postulated is that an institution will not

be able to support existing and developments in emerging areas, or enter these emerging growth areas successfully. It may be necessary to break down and cross traditional departmental and faculty boundaries. Hard choices will have to be made. Debates within universities about consensus building, and the balance of problems underlying institutional self-evaluation and self-renewal. We have illustrated the conflict between corporate responsibility, the college nature of departments and faculties and individual academic freedom. Faculty and departmental self-renewal tend to break down under conditions of financial stringency and no traction. Naturally there is a reluctance to face reality and hard choices.

It is not sufficient to appoint vice chancellors hardworking, outgoing, academics with an overriding concern for improving quality, but whose acquaintance with planning, resource management, financial forecasting and control and organizational behaviour is minimal; nor "managers of survival" who will balance the books, recruit students and raise the funds.

High quality managers of appropriate academic standing are required who can overcome institutional inertia. They have to secure institutional agreement to department mission statements that recognize the need to protect centres of excellence and that resource allocation processes cannot be based on "fair shares for all". They have to overcome resistance to change in circumstances when preservation of the status quo is the natural rallying point for a consensus.

Thus a case can be made, and the language does not have to be offensive, for the appointment of high quality managers who can apply the professional management expertise to create an environment which will lead to positive responses to institutional self-evaluation and secure participation in strategy formulation and implementation. They should manage not for survival but for excellence, with a deliberate bias towards change.

Streamline the antiquated committee structures, create joint committees, ensure the appointment of high quality managers who can apply the professional management expertise to create an environment which will lead to positive responses to institutional self-evaluation and secure participation in strategy formulation and implementation. They should manage not for survival but for excellence, with a deliberate bias towards change.

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The settled period of economic growth which was experienced by the Western economies in the 1950s and 1960s gave rise to a number of overarching social scientific theories which professed to give explanatory accounts of new, inevitable social trends. Daniel Bell and his colleagues proposed that we had reached "the end of ideology" as mass affluence had finally disposed of the war of class ideologies that Marx had seen as a defining characteristic of capitalism.

Ralf Dahrendorf and others examined what they conceived as ideology-free "industrial society" in which conflicts that were to be found could be explained under a broad social consensus about the value of, for example, the market, rather than seen as fundamentally questioning it.

Detailed research on specific bearings of these new social relations, such as the Linton Car-workers studied by John Goldthorpe and his co-researchers, turned up evidence of their "bourgeoisness" aspirations towards a middle-class lifestyle and the cash to achieve it - which fitted the pattern of a new social class. And yet, as Anthony Giddens pointed out some time ago, such theory already has an archaic look to it. One lesson that has had to be learned the hard way is that extrapolations of new trends into the long-term future require a healthy dose of scepticism in the social sciences.

Recognition of the periodicity of economic and social change does not mean that theories which aim to explain apparently discrete acts of events in the short-to-medium term cannot be successful. Nor is it necessarily the case that broad concepts generated to help such explanation for one period have to be jettisoned and totally new ones developed in order to understand later developments. Private firms, for example, generally have to make profits to stay in business, although the strategies they adopt to achieve this in particular industry, or the methods of obtaining profitability will vary over time and between countries. One reason for this is that the nature of the short-term period firms are allowed to turn over large investments by the banks - five years is common, whereas in Britain and the United States banks tend to operate on a quarterly system of profit and loss accounting with respect to industrial investments. Such structural factors can be crucial to the success of firms' investment strategies.

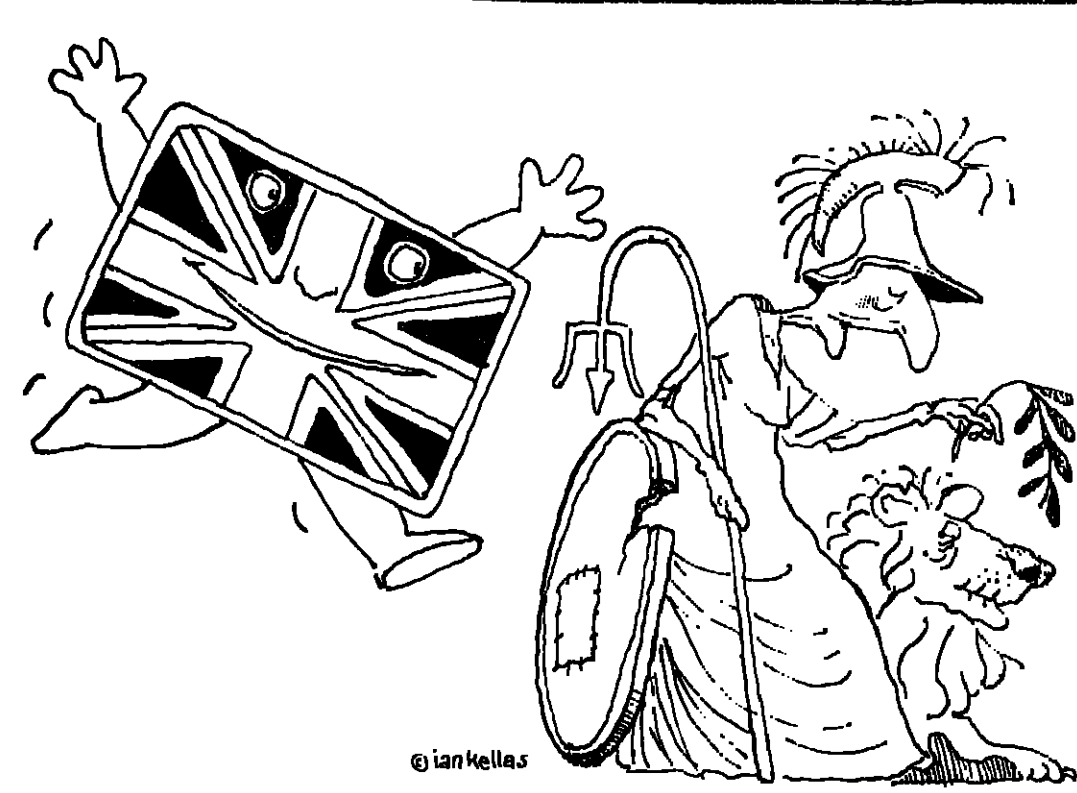
In the 1960s and early 1970s British industry under the stimulus of successive Labour and Conservative governments, was urged to restore itself to its former period of large investments by the banks - five years is common, whereas in Britain and the United States banks tend to operate on a quarterly system of profit and loss accounting with respect to industrial investments. Such structural factors can be crucial to the success of firms' investment strategies.

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This has left the contemporary British economy poised precariously between two competitive blocs: the advanced industrial countries and the newly industrial countries (NICs). Over the past two decades - as the National Economic Development Office stated in their submission to the recent House of Lords inquiry into overseas trade - British manufacturing investment has been disproportionately directed towards cost-cutting and labour-saving, mechanization rather than towards developing new products and markets through quality-conscious investment incorporating advanced design and new technology. Thus, while Britain has performed relatively well in standardized, price-sensitive products - the markets now being consolidated around this time and these changes began to decentralize. These changes began to decentralize. These changes began to decentralize.

The reality of Britain's parlous industrial condition thus has much deeper causes than simply "the effects of world recession". Restructuring remains high on the agenda in the 1980s, but we hope to show, its forms are now very different from those of two decades ago; indeed many of them emerge as mirror images of what was



Flexibility is the key to the restructured UK economy. Philip Cooke and Kevin Morgan count the social cost.

Britain goes on a bender

happening in the 1960s. A more flexible, entrepreneurial economy is being sought, obliging management to innovate or liquidate by exposing firms to an exacting monetarist environment. Management, in turn, has adopted a more intransigent stance with workers. Nor are British firms necessarily seen as vehicles for British economic success; a greater premium than hitherto has been placed on inward investment, despite reductions in world industrial capital mobility. Japanese and other foreign firms are lionized not so much because they are the purveyors of new jobs, but because they are the bearers of innovative managerial strategies. The aim is to tutor British labour and management in their ways.

The rigidities of Fordism are giving way, in a context of lower growth, more erratic markets and demand for more customized products, to a flexible future. Companies are seeking flexibility from their workforces, their technology and their suppliers. The new manpower philosophy was recently stated by the director general of the Engineering Employers' Federation to involve jettisoning the notion of "hoarding" labour because upturns are more elusive. There will be greater resort to contracting out short-term for a second-class, casualized workforce and greater income polarization between it and a permanent, multi-skilled core of employees.

This is only one of a battery of strategies already being adopted in British industry, including some services, at present. The switch from economies of scale to economies of scope involves smaller firm sizes through reduced workforces (some of this kind rather than new firm formation) and the increased use of subcontracting firms to supply components to be assembled in factories, or services such as selling or sectoral services in offices - some of the latter being home-based freelances. The economies of scope result from the break-up of mass markets and the growing importance of market niches which can be met through computerized small-batch production or servicing.

In contrast to the era of shopfloor power in the 1960s there is a hostility towards labour organization which is creating "producer services" part of the economy, yet while output rises, employment declines - a good example of the "jobless growth" phenomenon. Part of this growth of employment in the 1970s was associated with decentralization away from central London to the west, in particular, where Reading, Bristol and Cheltenham were beneficiaries, whereas in the north growth occurred through the upgrading of sub-offices or the opening by national companies of new, regional branches in places such as Middlesbrough. Where firms decentralized, they did so in the main to

escape the tight labour market for routine clerical workers in London. In either case, the new employment was largely female and full-time.

The 1980s have seen the reversal of some of these trends, most clearly in the erosion of employment; this erosion is occurring more rapidly in the peripheral areas of Britain than in the core locations in and around London. This is because the routine clerical labour which was being sought a decade ago is being supplemented and replaced by computer technology. Insurance has become one of the most fully-computerized of industries. Even routine work that was undertaken by professionals such as investment analysis, underwriting and some legal services has now been automated. Clearly the tasks of lower-skilled workers operating computers may now be more diverse and involve some element of retraining, while specialists now focus exclusively on the more intellectually challenging aspects of the work. However, that too is more diverse, requiring greater flexibility and less reliance on precisely-defined bodies of expertise. One result of these changes is an increasingly polarized skill structure with demand remaining high for highly-qualified technical and professional employees, and demand declining for the less-skilled mass. Unionization is not particularly strong among the latter group, and up to 20 per cent of staff in individual offices can be freelance agents or inspectors. For those in the professional grades, restructuring through technical change has brought a relaxation of the routine part of their workload and improved career prospects; for the less-skilled "flexibility" has brought increased job insecurity.

Electronics

Over the past decade in particular, Berkshire has become synonymous with burgeoning growth in the electronics industry. In the high-technology part of the electronics industry Berkshire topped the league in employment growth by county with 7,800 new jobs 1971-1981. It is at the heart of the so-called "western corridor" along the M4 motorway and its secret is now eagerly sought by a host of development agencies. Currently, some 30,000 are employed in electronics - one in 10 of the employed population. This growth complex has developed from three distinct sources: indigenous growth; relocation from elsewhere in the south east; and from foreign direct investment. It is not the brainiest economy that predominates here; rather it is research and development, marketing, headquarter and distribution facilities.

Berkshire's attractions include easy access to Heathrow Airport and London; proximity to government research establishments; and a labour force high in technical skills and low in trade union affiliation. Employers in the complex view the county as inimical to the flexible labour practices which it has helped to pioneer. However, the electronics revolution is not without its problems. Local planners are fretting over the growing mismatch between the professional skills in demand by electronics firms and the semi-skilled unemployed available. So, to what extent do Berkshire's changes offer a route out of recession for presently less-favoured areas whose electronics presence is largely low-technology and derived from the decentralizations of the 1960s and earlier? Its physical attractions cannot easily be replicated, nor can its high skill base be cloned overnight. Furthermore, while the county is often referred to as an exemplar of development without aid, it should be more widely appreciated that the county is a major beneficiary of the Ministry of Defence budget - military sub-contracting awards within the county. In contrast to Government aid to the regions, the defence budget has blossomed between 1979 and 1985.

Hence injunctions such as "Britain needs more Berkshires" can appear as attractive political slogans to county councils in depressed areas of "outer Britain" competing avidly with each other in the business press to sell their attractions to inward investors. The tragedy is that unless they can make themselves as internationally accessible as Berkshire, quickly generate a highly-skilled local workforce and deprive the south east of its hegemony in defence-procurement, their appeals to the high-tech community will go largely unheeded.

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TWO INDUSTRIAL PROFILES

The production and application of new technologies are of crucial importance to the changes taking place in the organization and location of work as British industry restructures in the 1980s. These technological changes can have far-reaching implications both inside and beyond the workplace.

In 1974 the insurance industry employed 261,000 in Britain. This figure rose gradually to 275,000 by 1981 but by 1985 it had fallen to 240,000. Insurance is thought of as one of the key sectors in the growing, wealth-creating "producer services" part of the economy, yet while output rises, employment declines - a good example of the "jobless growth" phenomenon. Part of this growth of employment in the 1970s was associated with decentralization away from central London to the west, in particular, where Reading, Bristol and Cheltenham were beneficiaries, whereas in the north growth occurred through the upgrading of sub-offices or the opening by national companies of new, regional branches in places such as Middlesbrough. Where firms decentralized, they did so in the main to

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BOOKS

Academic freedom of thought

Church and University in the Scottish Enlightenment: the moderate literati of Edinburgh
by Richard B. Sher
Edinburgh University Press, £30.00
ISBN 0 85224 514 1

The moderate literati of 18th-century Edinburgh were the most distinguished intellectual offspring produced by the Presbyterian Church of Scotland. Much more than mere clergymen, they were academics and writers, participants in the great intellectual movement of the Scottish Enlightenment. At their head stood William Robertson, principal of Edinburgh University and author of histories of Scotland, Charles V. and America; flanking him were Adam Ferguson the moral and social philosopher and

Hugh Blair the rhetorician, the playwright John Home and the publicist Alexander Carlyle.

Richard B. Sher's book is the first full study of the moderate literati as a group, and in every respect it is a major contribution. It is meticulously documented, the fruit of unusual energy in identifying and examining primary sources; and it is informed by an equally extensive knowledge of the secondary literature, knowledge which Sher distils in a closing bibliographical essay that is invaluable in itself. The book's inspiration comes from recent work on the Enlightenment in France, in which the Enlightenment is approached at the level of institutions, culture and ideology—the level below that of pure ideas. When the Scottish Enlightenment is approached at the same level, Sher contends, the moderate literati of Edinburgh can be seen to have occupied a central position within it.

Part one of the book studies the social and institutional position of the moderates: their backgrounds, education and coming together as a group, their seizure while still fledgling ministers of the initiative within the Kirk, and their attainment of positions and power in the University of Edinburgh. Throughout Sher emphasizes the moderates' pursuit of independence. In the Kirk the moderate "revolution" in the 1750s effectively ended the subordination of ecclesiastical interests to secular

political factions. Confirming the earlier, unpublished analysis of L.D.L. Clark, Sher also demonstrates that it was the group's success in forming an autonomous "moderate" party within the church which forced their "popular" opponents to do likewise; the latter had previously had no such clear identity. A similar independence from political control was won in the university, where Robertson's shrewd principality reduced town council interference in academic affairs.

Independence did not, Sher makes it clear, mean the differentiation of church and university from society and state. The moderates would organize the Kirk on the same principles of authority, discipline and subordination as held sway in society at large; and they still cultivated the support of politically influential to obtain appointments, their relatives and friends. What the moderates sought was rather to raise the status of ministers and academics in the eyes of the laity, and to vindicate their freedom to engage in cultural and scholarly activity.

In part two Sher turns to the culture and ideology of the moderates as preachers, teachers and publicists. Here his emphasis is on the didactic character of much of their work, in which the values of Stoic morality were combined with a still powerful Calvinist religious commitment. As preachers the moderates might, by adopting the rhetorical principles of

Hugh Blair, seek to make their sermons polite and orderly; but they also continued to make vigorous use of the traditional convent-based jeremiad. As teachers they were unashamed moralizers: as professor of moral philosophy at Edinburgh Ferguson followed the example of Francis Hutcheson in putting exhortation before analysis, and rejected the more sophisticated approach of Hutcheson's Glasgow successors Adam Smith and Thomas Reid. (For Sher all Ferguson's work, including the *Essay on Civil Society*, can be read in this straightforward way.) As publicists the moderate literati intervened spiritedly in a succession of literary and political controversies, over stage-plays in the 1750s, over a Scottish militia and Ossian from the 1760s, and over the American War and Catholic relief in the 1770s. Sher's assessment of the moderates' "nationalism" over the militia is oversimplified; but his discussion of the Ossian affair is original and refreshing, breaking away from the narrow issue of forgery.

Sher's study thus provides a wealth of information and insight. But does it establish his contention that the moderate literati occupied a central position in the Scottish Enlightenment? To help mount his case, Sher takes issue with the interpretation of the Scottish Enlightenment outlined in an essay by Hugh Trevor-Roper. But here perhaps Sher labours a little. Trevor-Roper's point, albeit impressionistically stated,

was that the Scottish Enlightenment commands attention for its intellectual originality of its best thinkers, headed by David Hume and Adam Smith. Any historical explanation of the Scottish Enlightenment must obviously address the social conditions which made such intellectual achievement possible; but the achievement cannot be understood in these conditions alone. It also requires the ideas and works of the thinkers (among whom should certainly be only Robertson and Ferguson). What Sher does demonstrate is that the institutional and cultural initiatives of the moderate literati contributed a great deal to establishing the social conditions in which the Enlightenment could flourish in Scotland. But a view of the Scottish Enlightenment which has the careers and collective ideas of the moderate literati at its core and leaves the thought of David Hume and Adam Smith to the side is, I think, distorted.

Even if Sher's chosen level of approach falls short of its target, however, this is an important book. Handsomely produced by its publishers, it is a landmark in Scottish Enlightenment studies.

John Robertson

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Failure of military tactics

Why The Crimean War? A cautionary tale
by Norman Rich
University Press of New England, £20.00
ISBN 0 84751 328 6
From Waterloo to Balaclava: tactics, technology, and The British Army 1815-1854
by Hew Strachan
Cambridge University Press, £19.50
ISBN 0 521 30439 3

The Crimean War was one of the more important conflicts of the 19th century. As the first major European war since 1815, it represented a watershed in international relations and a test of the armies and navies of several European powers. These two books, despite their differences in scope and approach, add considerably to our understanding of both issues.

Norman Rich focuses upon the diplomatic policies and motives of all the major powers, and examines the crisis from its origins to the Treaty of Paris which ended the war. By synthesizing much of the existing literature, he provides a lucid and comprehensive account of the prewar and wartime diplomacy, as well as of the peace-making process. He largely endorses the interpretation of Paul W. Schroeder, and is a fiercely critical of aspects of British policy, especially the contributions of Palmerston and Lord Stratford de Redcliffe. He argues that only Austria worked consistently to avert war while Napoleon III, in seeking more freedom of action for France, wished to undermine the existing international order. Rich concludes that the war, though won by the allies, proved counter-productive, and that it neither removed the Russian threat (despite weakening her for two decades) nor benefited the long-term interests of Britain, France and Turkey. Indeed by disrupting the Concert of Europe, the war weakened Austria and enabled Sardinia and Prussia to reap the harvest of the Crimean conflict.

Rich maintains that there are lessons to be learned from this crisis and even analogies to be drawn between the tasks of containing Russia in the mid-19th century and in the present day. Few would dispute his wish that political leaders should strive to maintain peace through "the politics of grouping" (that is, detente or peaceful coexistence in its modern parlance), but historical analogies can be misleading. The two contexts are radically different, especially as the postwar Soviet leadership, however opportunistic or circumstantial in its tactics, has hardly been wedded to the maintenance of the international order. Despite this caveat, Rich has skillfully

woven together the disparate strands of a complicated international crisis in a manner which will be appreciated by scholars and students alike.

Hew Strachan has written an altogether different work. It is a highly specialized study of the weapons, tactics, and military thought of Britain's pre-Crimean army, reflecting the author's attention to detail and his command of the manuscript sources. It complements his earlier work on the administration of the pre-Crimean army and buttresses his thesis that the British army was neither bereft of ideas nor innovation during the period from Waterloo to Balaclava.

In his preface Strachan admits that until 1852 reform tended to be "specific and local", and that the pressure for change, fuelled by the writings of some Peninsular veterans and officers from the Royal Artillery and Royal Engineers, were firmly contained by the ageing Duke of Wellington. Thereafter, Lord Hardinge, the new Commander-in-Chief, aided by Prince Albert, instituted some changes, including the camp of exercise at Chobham in 1853, but their full implications, particularly the tactical significance of the revolution in the power of small arms, could not be fully absorbed before the outbreak of the Crimean War. Indeed, as Strachan emphasizes, the army's prime concerns were home defence and colonial warfare; it had never expected that it would have to mount an offensive war against a European opponent.

Defence of the ancien régime

Edmund Burke and the Practice of Political Writing
by Christopher Reid
Gill & Macmillan, £25.00
ISBN 0 312 23696 4
Burke's Reflections on the Revolution in France
by P. F. Lock
Allen & Unwin, £18.00
ISBN 0 04 800036 1

Edmund Burke is acknowledged to be one of the great masters of English prose but his literary craftsmanship is scarcely ever set against his political objectives. Christopher Reid argues that Burke's "thought" appears in a variety of modes: as pamphlets, letters, speeches, memoranda, orations, committee reports, party tracts and so on. To get at the real Burke we need to recognize how the different elements in his work are put together. Then we need to incorporate into that understanding some account of the environment within which, and the audiences for which, these "performances" were given.

All this is very well done and we will

Strachan emphasizes that the army had benefited from its study of the Peninsular campaigns and, more importantly, from his experience of colonial warfare, but fighting against a wide array of foes, and over an immense variety of terrains, hardly resolved any of the disputes about military tactics. Some officers realized the value of mounted infantry, of massed heavy artillery, and of looser infantry formations but the army still entered the Crimea committed to its traditional tactics. There were important changes: the arming of the infantry with the new Minié rifle, whose range and accuracy portended revolutionary changes in the conduct of warfare, and the increase in the numbers of men and horses for the artillery secured by Hardinge and Prince Albert, but the army had never evolved a coherent strategic doctrine.

Strachan might have rounded off his study with a fuller assessment of the army's performance in the Crimea, but he has certainly argued persuasively that there were developments in military thought and practice during the "long peace". While the significance of these ideas and innovations may still be debated, he is right to claim that they should not be ignored.

E. M. Spiers

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The charge of the light cavalry at Balaclava as depicted in The Illustrated London News.

note that Edmund Burke adopted different "languages" as anything like perceptible entities. It may be stylistically illuminating to notice the deployment of different idioms but I am not sure how much this tells us about a particular work, or even "performance", especially when, in a work like the *Reflections*, several idioms may readily be identified. To be fair, Christopher Reid tries not to push his conclusions further than the literary and stylistic aspects of Burke's thought and writing. His remark, however, that the manner of address in the *Reflections* "shapes and informs both the argument and the outlook" of the work shows how tempting it is to cross the threshold into unwarranted speculation.

Historical understanding of the thought of Edmund Burke can only grow out of detailed investigations into the personal, party, political and, where appropriate, social circumstances in which Burke found himself. Burke actually said, (Attempts to fit his philosophy into some system a posteriori have been the bane of Burke scholarship.) Dr Lock's admirable investigation of the *Reflections* is a model of its kind in most respects. He gives us a scholarly and comprehensive composition of the work which man-ages at times to be almost exciting. French comes across as an expert on Burke affairs and one who did not share the superficial English sense of pleasure at the embarrassment of the

old enemy in 1789. Thereafter, his concern for that country led him to compose a work of enormous passion, wisdom and feeling which was at the same time a work of persuasion. Like Dr Reid, Lock is alive to the well-worn rhetorical tricks that Burke gets up to in his anxiety to make his case the more powerful.

Lock's discussion of the content of the *Reflections* is both descriptively clear and analytically helpful, even though there are no great surprises. He sets out the basic political and social principles which Burke was determined to lay down but he escapes more general ruminations on the quality of Burke's thought. Surely it is possible to argue that even if the *Reflections* was not a systematic exposition of a body of beliefs and ideas, represented as the coherent defence of the ancien régime in Britain and Europe. As such it stands and as such later generations have found in the fundamentals of a conservative philosophy of man, society and politics. This is not to impose a system upon Burke but it is to point to his counter-revolutionary thought as the legal tradition, the natural law, the political economy and the philosophy of taste are, in the last analysis, subsidiary.

Frank O'Gorman

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BOOKS

Bleak destinies

Love is the Heart of Everything: correspondence between Vladimir Mayakovsky and Lili Brik 1915-1930
edited by Bengt Jangfeldt
translated by Julian Gaffey
Polygon Books, £17.95 and £9.95
ISBN 0 9487 01 4 and 0 94 9
Marina Tsvetaeva: the woman, her work and her poetry
by Sven Karlinsky
Sage Publications, £27.50
ISBN 0 312 25582 1 and 27574 1

Today began Anna Karenina with the celebrated aphorism: "All happy families are alike. Every unhappy family is unhappy in its own way." The same might be ventured of poets, except that there are no happy poets. Vladimir Mayakovsky (1893-1930) and Marina Tsvetaeva (1892-1941), two of the most significant Russian poets of this century, chose ultimately the same bleak destiny: suicide. Yet their individual paths towards this unhappy end could hardly have been more dissimilar, despite superficial similarities that suggest themselves – the failure of love, the failure of communication, political reality in Russia after 1929 (a watershed year after which independent literary expression ceased to be tolerated by the Soviet state).

A comparison of these two books need to underline the divergence in the lives of two poets who shared a common death. *Love is the Heart of Everything* presents a poet who remained constant to his "enormous" love for Lili Brik from 1915 to 1930 (although this constancy did not prevent other partners from engaging in occasional liaisons during those fifteen years), and who contributed actively to the development of literature in the 1920s, not least in changing lecture tours of the proletarian took upon eighteen months of his life from 1923 onwards. As Mayakovsky wrote in one poem, he was a man "of love and posters". In contrast, Karlinsky's documentation of Tsvetaeva's life (his second, following Marina Tsvetaeva: her life and art, based on a doctoral thesis and published in 1966) shows the woman as abandoning her country in 1922 for a 17-year émigré existence in the West, before an uneasy return to Stalin's Russia. She dissociated herself from politics ("I am not interested in politics, I do not understand it and, in any case, it is outweighed by Mozart"), survived an uneasy and intermittent relationship with her husband, Sergie Elom (who once described his function in her life as that of "lifebelt and allusion"), and, as Karlinsky argues, drifted through a series of infatuations that were necessary preludes for intense poetry.

The hallmark of Mayakovsky's poetry is articulation, of Tsvetaeva's commemoration it is fitting, therefore, that in *Love is the Heart of Everything* it is the present tense of the

correspondence between the lovers that predominates, whereas in *Marina Tsvetaeva: the woman, her work and her poetry* Karlinsky has adopted the retrospective mode of the biography. Mayakovsky's life is illuminated by the single shaft of light, his love for Lili Brik, which is not only the "heart", but very often the "everything" of the title. This title, absent in Jangfeldt's original Russian edition, comes from Mayakovsky's diary-letter (number 113), by far the most interesting item of the whole correspondence. The letter was never sent to Lili Brik.

The informative apparatus of introduction and notes, stretching to a hundred pages (as against some 170 pages that the correspondence occupies), does little to mitigate the narrowness of the volume's scope. Karlinsky, on the other hand, attempts to place Tsvetaeva in her historical and cultural context, and to evaluate the ideas and works of the thinker (in that order) by means of the poetry (in that order) by means of the poetry (in that order). He is careful to allow her earlier life in Russia and her residence as an émigré equal weight. She leaves Russia on page 114 of his biography and makes her unfortunate return there on page 228.

Each book belongs to a specialist Russian series. *Marina Tsvetaeva* is the latest in the well-established Cambridge studies in Russian Literature, while *Love is the Heart of Everything* is

one of three titles marking the launch of the Polygon series. Although there is little to choose in the elegance of scales tip in favour of the Polygon production when it comes to the standard of content, meticulous research by the editor is enhanced by the excellent tact of Julian Gaffey's translation (which overcomes obstacles of nuance available in Russian diminutives as well as problems of preserving Mayakovsky's puns to achieve a consistently high level of presentation).

Karlinsky's writing, by comparison, is not entirely free of blemish. Apart from an understandable, though too persistent, partisan thrust directed at Soviet political life, the author allows the occasional lapse of style ("centred around", "quite unique") and some imprecise chronological data to creep into his account. These are small matters, however, and should not detract from the merits of an otherwise extensive and detailed research that has allowed Karlinsky to bring up to date his portrait of a poet who has, partly through the feminist-snowball factor come in for renewed attention in the years since the biographer's first study.

Leon Burnett

Dr Burnett is lecturer in literature at the University of Essex.



Vladimir Mayakovsky in 1924

Back to the future

The King of Times: selected writings of the Russian futurist
by Velimir Khlebnikov
translated by Paul Schmidt
edited by Charlotte Douglas
Harvard University Press, £15.75
ISBN 0 674 50515 8

Khlebnikov was indeed the king of time. He went far beyond the futurist futurists (Mayakovsky and Pasternak among them) in thinking out his future utopia and set to work to realize it. He established a "Government of the Future" with himself as a presidential foundation of history, and language to rediscover the lost universal past. He died, aged 37, in 1922, his poetry an inspiration to his contemporaries and centuries ahead. His most productive legacy is not his

unwavering confidence in youth, planning, and technology, but his poetic language. Khlebnikov never abandoned the futuristic idea of "the word as sound, and his was the most extensive experimentation with 'zaum' (happily rendered by Schmidt as "beyond-sense"), poetic language made from combinations of sounds, prefixes, roots and suffixes, its words free of fixed meaning and syntax, yet powerful carriers of association and potential meaning. He "discovered" correlations between (for instance, sonants and concepts) with the circular being associated with the circular movement of his poetry, rich in neologism, etymological comparison, periphrasis, alliteration, onomatopoeia, and dialect, is a translator's nightmare.

Khlebnikov was soberly aware that his work might seem, even in the original, as much a failure as a revelation, and the problem is inevitably compounded by translation. Schmidt rejects the principle of fidelity to the sense and approaches the task with creativity which Khlebnikov would surely have approved, but which has

uneven results: success with, for example, "Incantation by Laughter", where Khlebnikov's *zaum* finds a convincing equivalent in neologisms created from Old English ("Hlabla! Loufensla! lauffings lafe, hloban ulaftu!") etc), but there is more or less disregard for the original in other poems. Gary Kern's *Snake train*, which has been available since 1976, is a more pedestrian, but more accurate translation.

It is disappointing that Schmidt and Douglas choose many of the prose pieces already translated by Kern; however, there are more poems, and it is greatly preferable to have Zangezi complete, as a showcase of *zaum* and Khlebnikov's innovative composition techniques; it is also a gain to have something from the *boards of destiny*. There are, though, some deficiencies in the apparatus of this edition. Provision of some translated Russian texts of the poems would have allowed the reader into the sound dimension of Khlebnikov's work, and given Khlebnikov's vast erudition in Slavonic and Oriental history, mythology, and folklore, some explanatory notes would have been helpful.

Most of all the reader who has no

Master of comedy

Three Comedies
by Pedro Calderón de la Barca
translated by Kenneth Muir and Ann L. Muckendie
University Press of Kentucky, £7.95
ISBN 0 8131 0166 2

In spite of recent successful productions by both our major national theatre companies, the drama of Calderón remains outside the experience of most English-speaking audiences. This volume of translations of three of Calderón's comedies, supplementing as it does the four plays published by the same team in 1980, is a welcome attempt to extend the range of his drama available in English. The translators have chosen well: to a pair of acknowledged comic masterpieces, *Casa con dos puertas nunca se abre* and *No hay burlas con el amor*, they have very enterprisingly added a less well known play, not yet available in a separate scholarly edition, *Mulanas de abril y mayo*. The translations come with an appreciative introduction and helpful notes on the text.

It would be interesting, nevertheless, to know what impression of Calderón's theatre the non-specialist would get from this collection. The generic term *comedia*, used almost to the exclusion of all others in Spanish Golden-Age dramatic terminology, underlines the distinctiveness of classic Spanish theatrical taxonomy. Calderón's comedy, perhaps more than any other, feeds off and illuminates the more "serious" dramatic modes. The craftsmanship of these plays, their moral vision, their acute sense of the absurd theatricality of human behaviour, all serve to highlight the central place of the comic in Calderón's drama as a whole. No one actually gets killed in these plays, of course, but they could not exist were it not for the pathological mendacity and deceptiveness of the characters. Where the wife-murderers talk and talk and hear or see nothing of the truth that is all about them, the jealous lovers in these farces embroil themselves and each other in ever more complex webs of intrigue simply because they are unable to be straight with one another.

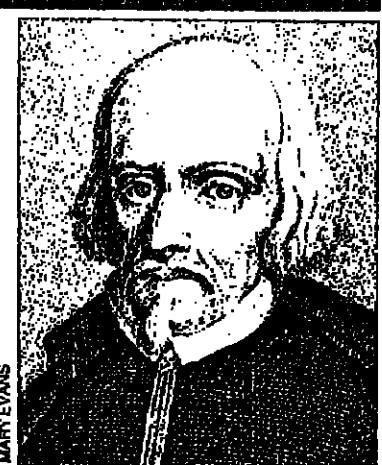
The role of convention in all this is, of course, paramount, and there is great fun to be had by watching Calderón's mocking attitudes and behaviour, and above all theatrical conventions, which for some reason we are disposed to take seriously in other contexts. In this respect Calderón is his own best customer. Cross-references abound, both to his own plays and to others which the audience would have known, conventions are parodied, expectations defeated. At the end of *Mornings of April and May* one pair of lovers decides that they do not love each other any more. "What!" exclaims another character when invited to hide in a china cupboard. "Is this a comedy by Calderón?" But what is so comic about a china cupboard that is so serious about an arras?

The aspects of higher education have been divided between public and private institutions, and with what consequences. It has been widely assumed that private higher education is predominantly an American phenomenon. Geiger corrects this assumption in his study of private higher education in seven countries: Belgium, France, Great Britain, Japan, the Netherlands, the Philippines, and Sweden. Out of this study comes a perspective for probing the underlying rationales of private education in the United States. Geiger analyzes the issue of government financial support for higher education, and broadens the understanding of the social and political underpinnings of the division between public and private in higher education.

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Wendy Rosslyn

Wendy Rosslyn is lecturer in Slavonic studies at the University of Nottingham.



Calderón de la Barca

good grounding in Spanish Golden-Age drama could have done with more guidance in the introduction about the contemporary Spanish stage, acting styles, the use made by the playwright of his audience and their expectations. Calderón's highly ornate verse will also worry English readers, I imagine. Affectation for satirical effect is all very well, but Calderón's characters customarily pass the time of day in beautifully chiselled symmetries and elaborate metaphors. They strike attitudes and speak the language of the stage, but they also remind us that Calderón was a contemporary of Monteverdi as well as of Shakespeare.

The translators have done their best with an impossible task, but they have produced versions which are more efficient than effective. Iambic pentameter was intelligently chosen as the nearest equivalent to Calderón in period, but we have to look as far afield as Sheridan to find an equivalent dramatic mode in English. These translations give a good account of what happens in a comedy by Calderón, but they are inevitably full of things which no one is ever likely to say on an English stage, or off it.

B. W. Iff

Dr Iff is lecturer in Spanish at Birkbeck College, University of London.

Roger L. Geiger

PRIVATE SECTORS IN HIGHER EDUCATION

Structure, Function, and Change in Eight Countries

With a Foreword by Burton R. Clark

In this first scholarly treatment of private education outside the United States, *Private Sectors in Higher Education* examines how the tasks of higher education have been divided between public and private institutions, and with what consequences. It has been widely assumed that private higher education is predominantly an American phenomenon. Geiger corrects this assumption in his study of private higher education in seven countries: Belgium, France, Great Britain, Japan, the Netherlands, the Philippines, and Sweden. Out of this study comes a perspective for probing the underlying rationales of private education in the United States. Geiger analyzes the issue of government financial support for higher education, and broadens the understanding of the social and political underpinnings of the division between public and private in higher education.

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Ann Arbor, Michigan 48106 U.S.A.

BOOKS

Defects of reasoning

Madness and Reason
by Jennifer Radden
Allen & Unwin, £15.00 and £5.95
ISBN 004 170034 1 and 170035 X

Listening to a lecture on emotion by a philosopher, I was surprised to hear no reference to more than a century's empirical research in psychology, psychiatry, anthropology, sociology, neurophysiology and endocrinology — to mention only the most obvious. All this was said to have no relevance, although the argument made use of examples in a way that was scientifically unacceptable. "Studies in Applied Philosophy" therefore seems a rather provocative title for a series exploring "the philosophical and ethical issues underlying... controversies current in public and political life". Jennifer Radden does not wholly succeed in resolving this paradox of the validity of data in her book on madness and moral responsibility.

We have a moral intuition, she says, that wrongdoers should be excused if they act in ignorance, are forced to commit crimes against their will, or fail to understand what they are doing through madness, mental retardation, or being too young. But she sees the insanity defence as undermined first by too great a dependence on the medical model and second by the opposite of that — anti-psychiatry. The medical model, which is said to show "inhumanity, hidden normalism and spurious aetiological assumptions", must fail because diseases themselves do not provide an excuse: "when they affect action [they] do so through the mediation of psychological states" such as ignorance or compulsion; and if these are present, the actual disease becomes redundant to the question of responsibility. For its part, anti-psychiatry rejects the irrationality of the psychosis and with that the grounds for lack of guilt.

Instead, Radden suggests the criterion of "unreason", depending particularly on defects of reasoning and judgement. This shares a continuum with the child's mental processes ("pre-rational") and with the often foolish and incomprehensible behaviour of the sane, so reducing the insane can also be distinguished for instance by hallucinations or strange beliefs, these are not essential to proving their want of reason, which provides the only valid grounds for excusing criminal actions. Such an

"unreason" analysis is not incompatible with causal explanations for madness in psychological, social, genetic or biochemical terms; but these are said to be simply irrelevant to its moral and philosophical dimensions.

Radden finds the concept of diminished responsibility no help, since it remains a subjective decision as to just when responsibility becomes diminished enough to affect disposal by the courts. In a few well-chosen paragraphs, she also disposes of the Laingian rationale for psychotic behaviour: that the psychotic's strange speech may express his inner states is quite a different matter from him using this speech in order to express them; while Laing's view that schizophrenics conceal their real inner states makes claims by them as to the rationality of their actions not only unproven, but unprovable. "To see madness as more centrally connected to everyday life and experience... is crucial for altering social attitudes towards it. However, social change does not require that madness and society be equated." Well said.

Since lawyers and psychiatrists have manifestly failed to talk the same language on these questions, it would do no harm at all for a philosopher to bang their heads together. This book claims, in fact, that "a test for criminal insanity based on [unreason] advances beyond traditional and more recently proposed legal formulations." Would that it did.

Radden argues lucidly, uses a minimum of philosopher's jargon, and sees most things in terms of humane common sense, but her professional aloofness from data and lack of a clinical dimension regrettably undermine the whole structure. Propositions are asserted rather than proved. For instance, in the case of slow-onset dementia, she assumes that sufferers have a full knowledge of the significance of their actions and uses this to equate long-term personality change with ordinary criminal behaviour. But if so, when does dementia — and its exemption from clinical responsibility — begin?

Subjects like the M'Naghten Rules, which have occupied whole professional lifetimes, will not be easily redefined, and the absence of such essential references as John Wing's *Reasoning About Madness* and Norval Morris's *Mental Illness and the Criminal Law* raises some doubts as to the carefully ground for this work was explored. It raises stimulating questions, but in the end, has left things much as they were.

Hugh Freeman

Hugh Freeman is senior consultant psychiatrist at the Hope Hospital, Salford, and editor of the *British Journal of Psychiatry*.

Being unequal

The Theory and Practice of Human Rights
by L. J. Macfarlane
Temple Smith, £12.95
ISBN 0851172563
Inalienable Rights: a defense
by Diana T. Meyers
Columbia University Press, £32.50
ISBN 0231 050343
Rights and Rights
by Rex Macfarlane
University Press of Kansas, \$25.00
ISBN 07006 02666

In his new book Dr Macfarlane explores the theoretical basis and practical implications of the concept of human rights. In the first part he examines the nature of human rights, and concludes that they are distinguished from other rights by virtue of their universality, inalienability, parity, enforceability and practicality. He then analyses such rights as the rights to life, liberty and property, to freedom of belief and expression, to association and assembly and the social and economic rights, and identifies the forms and areas in which they can be construed as human rights. In the final chapter he explores the ways in which human rights can be realized in practice.

Dr Macfarlane's book is lucid, well-argued, level-headed and informed by

a strong moral impulse. He analyses the various rights with considerable skill and without losing sight of the complex and unequal world in which they have to be given an institutional expression. He makes out a strong case for viewing the economic and social as human rights and on a par with the so-called liberty rights. He is not afraid to push his argument to its logical conclusion and contend that its logical conclusion is that the state has a duty to provide the available food and not owe a duty of obedience to their government.

While Macfarlane makes many interesting points, some of his basic ideas fail to carry conviction. Sometimes he uses the terms natural, human, fundamental and moral rights interchangeably, whereas on other occasions he seems to want to distinguish them. He even talks of a "natural moral right", whatever that may mean, and suggests that some human rights are "more truly" so than others. Since, further, a theory of human rights lays down the kind of treatment and opportunities all men ought to receive, it presupposes a universally valid moral theory. Macfarlane has not worked one out, and is forced to rely on what he considers "obvious", "completely unacceptable" or "cardinal" moral principles. Finally, although he is aware of it, Macfarlane does not fully face up to the fact that the concept of human rights requires a radical reconsideration of the concept of the sovereign state. As long as we retain the distinction between citizens and non-citizens and regard the government as responsible to and for its own citizens, it is difficult to see how a state



"Parade in Moscow, 1956" by the Mexican artist Diego Rivera, from *Diego Rivera: a retrospective* (Norton, £45.00).

Marxism as system

Marxism: philosophy and economics
by Thomas Sowell
Allen & Unwin, £11.95 and £3.95
ISBN 0 04 320171 7 and 320176 8

If it survives at all, the secondary literature on Marx's thought will perhaps be valued primarily as a museum of intellectual vices. It abounds with unsupported attributions and undefended assertions.

This is due in part, no doubt, to the simple fact that secondary writers find it easier to quote each other than to go to the trouble of reading Marx himself, but it has had the consequence that whole traditions of Marx scholarship have grown up which bear only a remote and oblique relationship to anything Marx actually wrote or said. Again, the secondary literature on Marx is thoroughly partisan. This is not in itself an intellectual vice, since it

would be an absurdity to try to assess Marx's thought without reference to moral and political commitments which are frankly avowed. But partisanship becomes intellectually vicious when, as is very often the case, exposition is not distinguished from criticism and accounts of Marx's thought begin with large claims which ought properly to be argued for as conclusions of careful investigation. With a few outstanding exceptions — such as Kolakowski's magnificent *Main Currents of Marxism*, which encompasses an impeccably scholarly account of the chief Marxist thinkers together with a devastating criticism of all secondary writers on Marx have presented an image of the thinker in which exposition and assessment are conflated and the chief authorities for attributions to Marx are other secondary writers.

Thomas Sowell's little book on Marxism is admirably free of these vices. Written in a terse, lucid and unpretentious style that by itself distinguishes it from the great bulk of Marxist writings, it aims to provide a generally accessible guide to the main

ideas of Marx and his sometimes laborious Engels. In so doing it does display Marx's thought as a system, not, indeed, one that is in any way complete or finished, but at least a theory of man and history in a conventional disciplinary context. Sowell insists that Marx's concepts are not finally intelligible outside the context of his philosophical commitments, nor his political thought, from his understanding of economic life. These are not particularly original or interpretive claims, they are not intended to be. They become noteworthy in virtue of the meticulous thoroughness and detail with which they are worked out. It is in the course of his account of the theory of economic crises, Sowell distinguishes Marx's view from the underconsumptionist or "glut" theories — thereby laying out an historiographical tradition that has governed many secondary writers (including many Marxists). Sowell astutely rebuts a common criticism of Marx's theory of value, classically by Eugen von Böhm-Bawerk, according to which Marx's account of value consists in a logical proof or dialectical deduction when in fact such a criticism is precisely that made by Marx of Ricardo (in manuscripts unpublished at the time Böhm-Bawerk was writing). These are only two examples of Sowell's correcting erroneous attributions that have dominated much Marxist scholarship.

It is only in the last chapter, after he has presented his exposition of Marx's thought, that Sowell subjects it to systematic criticism. Here he is most arresting in arguing that the history of 20th-century Marxism and communism regimes is to be interpreted as revealing defects in Marx's thought. This is a powerful argument that undermines the vulgar (and thoroughly un-Marxist) academic cliché which, in seeking to exempt Marxism from historical responsibility for communist totalitarianism, tries to explain "actually existing socialism" as a mish-mash of arguments involving accident, cultural tradition, local circumstance and capitalist conspiracy. It is a criticism that Sowell does not include in his argument of Mises and Hayek that, because rational resource-allocation presupposes market pricing, Marxism is in effect an impossibility. This is an important omission, but one which does not detract from Sowell's achievement in giving us the best account of Marx's thought in existence.

John Gray

John Gray is a fellow of Jesus College, Oxford, and visiting professor in government at Harvard University.

rights in Rawls. In addition those permanently unable to work have a basic right to a certain level of income and types of services, and those who work but belong to the least well-off group have a basic right to a certain level of income as their adjusted return on contributions.

While Martin's work is thorough and lucid and extends some of Rawls's arguments in a new direction, it does not undertake a radical critique of his basic assumptions. Nor does Martin explore why Rawls did not feel it necessary to assign to the concept of rights the degree of importance it enjoys in the writings of other modern theorists of justice.

All three books in their different ways subscribe to the liberal theory of rights and attempt to extend it to new areas. They seek to justify social and economic rights, universal rights and affirmative action to create the competitive capabilities of the underprivileged. The liberal theory of rights in its traditional form is, however, inoperative in these concerns. It is, inoperative to a theory of man which cannot adequately explain why one should make sacrifices or suffer diminution of rights for the sake of others. Unless the liberal theory is radically reconstructed and grounded in a more satisfactory theory of the nature of the self and its conditions of growth, it cannot constitute the admirable objectives championed by the three authors.

Bhikhu Parekh

Bhikhu Parekh is professor of politics at the University of Hull.

BOOKS

Spatial data

Statistics in Geography:
a practical approach (second edition)
by David Ebdon
Blackwell, £8.50
ISBN 0631 13688 6
Categorical Data Analysis
for Geographers and
Environmental Scientists
by Neil Wrigley
Longman, £45.00
ISBN 0582 30127 0
Computer Programming for
Geographers
by David J. Unwin and
John A. Dawson
Longman, £7.95
ISBN 0582 30095 9

In 1963 Ian Burton announced that a "quantitative revolution" had occurred within geography, marked by an increased use of statistical methods and reflecting a deeper shift towards a theoretical, model-building approach. After more than 20 years, the present picture is more complicated than would have been predicted by a naive extrapolation of these trends.

Although the majority of research, in both physical and human geography, uses quantitative data as raw material, whether from field or laboratory measurements, remote sensing, ques-

tionnaire surveys or national censuses, in much of this work there is little or no attention to any formalized theory.

Moreover, there is a lively interest, rarely very quantitative, in many parts of cultural, historical, social and political geography that owes far more to recent developments in philosophy, Marxism and the human sciences than to the inspiration of formalized mathematical approaches or to the aspiration towards a generalizing, objective social science. Quantitative geographers who date from the 1960s or early 1970s, Young Turks in their day, are regarded by many of the younger generation as obsessed with technique and victims of an uncritical, unreflective philosophy.

For all that, there is a fairly amicable relationship between geographers who are strongly quantitative and those who are not. For example, the classic simplifying assumption of mutually-independent observations is generally violated, and many of the commonest methods of statistical inference do not carry over to geographical data without substantial modifications.

Although these biases and limitations are uncontroversial, geographers as a group have not done a very good job of explaining the possibilities and problems of statistics to beginning students. Most of the currently popular texts date from the late 1970s. In a 1980 review of these, the statistician David Jarrett roundly criticized a group of ten as "technically confused and unreliable" and "marred by an extreme emphasis on hypothesis testing at the expense of simpler methods of descriptive statistics". As that generation of books begins to age, and several authors bring out new editions

and matters of resource use. What they have done is synthesize, laboriously but admirably, an enormous wealth of material from all over the world, most especially from Britain and North America. The result is a dense mass of information with supplementary illustrations, but no real theme or insight into why and how environmental decisions are made.

The book falls unevenly into two parts. The first covers the basic ground in key resource areas — population, minerals, food, water, forestry and wilderness. This is introductory undergraduate material: it is solid on tables and statistics, although some are out of date and a number of tables are unnecessarily unwieldy. Nevertheless, the text is tightly written, the argument clear, and the coverage comprehensive.

The second part is less satisfactory. This is mainly because the authors do not live up to the expectations they create for themselves. Their aim was to discuss the problems and politics of resource management, to get behind the dry statistics with illuminating case-studies and a more detailed analytical presentation. What actually appears is a further synthesis of research reports, agency studies and textbook material. These do not flow one into the other. The text is disjointed and is often in danger of encouraging the reader to lose the thread.

For example, the chapter on models of policy-making hardly touches on the well-established theories of power and

decision-making, let alone applies these to environmental and resource management issues. There are certain peculiarities of environmental problems which pose difficulties for conventional political theories: for example, considerations of ethos (rights of animate and inanimate objects to exist), of equity (fairness to minority interests and especially to future generations), and of evaluation (the well-known dilemma of weighing tangibles with intangibles). None of these concepts is given adequate treatment, yet each is supposed to bring the arguments to life. Similarly, the section on environmental assessment is fine on established techniques but weak on the various purposes and achievements of such assessments.

The authors are at their best when treating topics with which they are most familiar — energy, water and wilderness management. Here, the thematic approach allied to a management context works well. What is missing, however, is a solid and challenging conceptual setting so that modern environmental management can be firmly established within the changing politics, economics and public expectations of a de-industrializing developed world and a ravaged developing world.

Timothy O'Riordan

Timothy O'Riordan is professor of environmental sciences at the University of East Anglia.

Perceiving places

The Geographer at Work
by Peter Gould
Routledge & Kegan Paul,
£20.00 and £8.95
ISBN 0 7102 0459 0 and 0494 9

Peter Gould was one of the foremost Anglo-American geographers during the 1960s. In what was, in many ways, a revolution in geographical thinking, Gould has every claim to be seen as one of the leading revolutionaries. He was in the forefront of the heady (and often bitter) struggles against the geographical establishment in the United States.

The charge was primarily one of lack of intellectual and scientific rigour of certain geographical work, dominated as it was by ad hoc regional descriptions and catalogues of factual material relating to specific places. The plea of



Drawings of figures found in the temple of Wadi el-Sebu'a (Amenhotep III), from *John Balnes's Fecundity Figures: Egyptian personification and the iconology of a genre* (Arts & Phillips, £32.00).

poral structure, which provoke many special questions and cause many awkward problems. For example, the classic simplifying assumption of mutually-independent observations is generally violated, and many of the commonest methods of statistical inference do not carry over to geographical data without substantial modifications.

Although these biases and limitations are uncontroversial, geographers as a group have not done a very good job of explaining the possibilities and problems of statistics to beginning students. Most of the currently popular texts date from the late 1970s. In a 1980 review of these, the statistician David Jarrett roundly criticized a group of ten as "technically confused and unreliable" and "marred by an extreme emphasis on hypothesis testing at the expense of simpler methods of descriptive statistics". As that generation of books begins to age, and several authors bring out new editions

or new texts, how far have such criticisms by statisticians been taken on board?

David Ebdon's book, which first appeared in 1977, seems to have been quite popular as an introductory text covering a standard mixture of spatial and statistical methods. In style, it is concise and informal, and there are many examples, exercises and statistical tables. It now includes 17 computer programs in Basic (which should prove widely useful), and some errors have been corrected. Unfortunately, however, many major errors remain: for example, the repeated misinterpretation of significance levels and confidence intervals; an uneven treatment of independence assumptions; the use of the Kolmogorov-Smirnov test for a distribution whose parameter is estimated from the data; and a frequent failure to distinguish notationally between distribution parameters and sample statistics.

More pervasive than these intermittent technical slips is a severely limited philosophy of data analysis some decades out of date, with its exaggerated emphasis on hypothesis testing, excessive use of fabricated data, and relative neglect of useful tools like transformation and even graphical displays. Despite much clear and straightforward presentation, as in the chapter on sampling, Ebdon's book has been too lightly revised and its limitations now appear in some way behind alternatives like John Silk's *Statistical Concepts in Geography* (Allen & Unwin, 1979). It will not satisfy the statisticians any more than its predecessors did.

One of the liveliest areas of statistics during the past 15 years has been the analysis of categorical data, counts or frequencies of different classes — for example, how many males or females; or how many clans from each lithological unit. Historically a poor relation of the analysis of continuous data, the field has been unified by the development of related families of models (logit, logistic, log-linear, and so on), which supersede or subsume earlier approaches based on measures of association or chi-square testing, many of them rather isolated or ad hoc. As among geographers, Neil Wrigley has been the leading advocate and exponent of these new techniques, and it is especially appropriate that he should produce a guidebook for his colleagues. Thorough, professional and beautifully laid out, his text leads the reader steadily through the new terrain, with many helpful remarks on confusing points like notation (an issue that looms large in a subject which is rich in composers' nightmares, endless snowstorms of subscripts and su-

Nicholas Cox

Nicholas Cox is lecturer in geography at the University of Durham.

social, economic and political tension, which Gould addresses only to a limited extent. For example, the dilemmas facing geographers engaged in research with military and commercial applications are described as "double-edged swords".

Only in the three chapters entitled "Thinking about what we think" does Gould take a rather more effective stance and address some of the philosophical and methodological issues which have come to the fore during the past ten years. For example, he briefly takes issue with the Marxist influence in geography, praising its role in heightening geographers' social awareness and accepting the criticisms of his own earlier approach to development issues, but rejecting its claim to be the ultimate and only truth. He also notes the growing links between geography and social theory reflecting a greater concern than is evident in preceding chapters with the relationship between social processes and spatial change.

It is not clear what purpose this book will serve in a British context, where — unlike the situation in the United States — geography remains very strong

in the school curriculum. Indeed, many of the techniques and models discussed in this book are now well established in the school syllabus. One serious drawback is the lack of any guide to further reading, so that interested readers will have no way of pursuing some of the stimulating work and ideas presented.

The book is by turns both stimulating and irritating. As it presents a highly personal and particular view of modern geography, the use of the definite article in the title is misleading. Most annoying of all in some instances is the style. Although Gould is a first-class writer, too often he strays across the boundary between the relaxed and the over-familiar. Most embarrassing of all is his eulogistic personification of geography as a "full and ripe woman of many moods", an image which recurs throughout the book.

Peter Dicken

Peter Dicken is senior lecturer in geography at the University of Manchester.

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Universities
Fellowships
Research and
Studentships
Polytechnics
Colleges of
Higher Education
Colleges with
Teacher Education
Colleges and
Institutes of Technology

Technical Colleges
Colleges of
Further Education
Colleges and
Departments of Art
Administration
Overseas
Adult Education
Librarians
General Vacancies
Industry and Commerce

Other classifications

Exhibitions
Awards
Conferences and Seminars
Courses
All box no. replies should be sent to THES at the above address

Personal
For Sale and Wanted
Holidays and
Accommodation

Universities

THE UNIVERSITY OF LEEDS School of Education

RESEARCH PROJECT: EVALUATION OF LEEDS CITY COUNCIL'S PRIMARY NEEDS PROGRAMME

Leeds City Council has invited the University to undertake an independent evaluation of the Council's Primary Needs Programme, a major initiative aimed at reducing the primary curriculum, improving teaching strategies and extending parental and community links, and involving the allocation of substantial additional human and material resources to the city's primary schools.

Informal enquiries may be made to Dr Robin Alexander (tel 0532 431751, ext. 4171)

SENIOR RESEARCH FELLOW/ PROJECT CO-ORDINATOR

REF. 28/88

To co-ordinate and implement the above on a day-to-day basis. Applicants should have substantial experience of qualitative and quantitative procedures, preferably in the context of policy-related educational research. Post a suitable letter of interest from 1st May 1986, or as soon as possible thereafter, until 31st July 1986.

RESEARCH ASSISTANT (FULL-TIME)

REF. 28/89

Applicants should have varied research experience. Post available for a fixed term from 1st September 1986 until 31st July 1988.

RESEARCH ASSISTANT (PART-TIME)

REF. 28/90

Applicants should have both primary and research experience. Leeds City Council has agreed to give the successful applicant the opportunity of employment as a part-time teacher in a Leeds primary school. Post available for a fixed term from 1st May 1986, or as possible thereafter, until 31st July 1986.

Selection: Senior Research Fellow within the range (£11,790-£14,870) on Range 11 (under review) and Research Assistant within the range (£7,035-£9,009) on Range 11 (under review) (pro rata 50%) in the case of 28/90) for Research and Analysis Staff, according to age, qualifications and experience.

Application forms and further particulars may be obtained from and completed applications sent to the Registrar, the University, Leeds LS2 9JT, quoting the appropriate reference number.

Closing date for applications 8th April 1986.

(74797)

THE UNIVERSITY OF PAPUA NEW GUINEA PORT MORESBY

VACANCY

Senior Lecturer/Associated Professor in English Language

(ESL) W091004/86

(DEPARTMENT OF LANGUAGE/LITERATURE)
Applications are invited for the position of Senior Lecturer/Associate Professor in the Service English Section of the Language and Literature Department. The Section is involved in teaching courses in English Language and Study Skills to students for entry and also to First Year Undergraduate Students in all Faculties.

The successful applicant will provide intellectual leadership, will assist in supervising junior Papua New Guinean members of staff, and will be expected to pursue research in his/her specialisation as well as to stimulate research within the department as a whole.

Candidates should possess a post-graduate qualification in Applied Linguistics or TESOL and have considerable experience in teaching and course design in Post-Secondary level in Third World countries where English is a second language.

Applications close on 15th April 1986.

SALARY

Associate Professor - K23,255 per annum plus gratuity

Senior Lecturer - K21,255 per annum plus gratuity

Applications will be treated as strictly confidential and should include three copies of a full curriculum vitae, a recent small photograph, the names and addresses of three referees and date of availability. In order to expedite the appointment procedure, applicants are advised to contact their referees to send confidential reports directly to the University without waiting to be contacted.

Applications should be forwarded to the Deputy Registrar (Staffing), University of Papua New Guinea, PO Box 320 University Post Office, Papua New Guinea.

(74798)

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nihe NIHE, Limerick, developed as Ireland's first technological university, is located on a parkland campus at the centre of the 500-acre Limerick Technology Park. NIHE was established with World Bank Finance to meet the need for graduate and postgraduate expertise created by the development in scale and sophistication of the Irish economy.

NIHE is composed of 3 constituent colleges: Engineering and Science, Business and Humanities. Programmes of study are offered to Bachelor, Masters and Doctorate level and there are over 3,000 students currently enrolled. Additional programmes of education and research are now being established in the new second phase of development, which was launched by the European Investment Bank.

SEMICONDUCTOR TECHNOLOGY -LECTURER

The Department of Electronics and Computer Engineering within the College of Engineering and above position.

A small fabrication facility has recently been commissioned within the department. Preference will therefore be given to applicants with experience in research in microelectronics and device physics, device technology and microprocessors. Appropriate industrial experience combined with a relevant postgraduate qualification is required.

SALARY SCALE:
R15,152-18,952 p.a.

Application material available from the Personnel Department, The National Institute for Higher Education, Planning Technology Park, Limerick, Ireland, should be completed and returned by Friday, 2nd May 1986.



The University of Lancaster

Department of Computing LECTURER

Applications are invited for the post of Lecturer in the Department of Computing. The Department offers a range of courses in Computer Science and its applications in the areas of Business, Engineering, Intelligent Systems, and Natural Language Processing. Preference may be given to candidates with research interests in Compiler Design or Program Support Environments.

Salary on the Lecturer scale £8,020 - £15,700.

Further particulars and application forms available from the Department of Computing, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications (five copies) should be sent to the Department of Computing, Lancaster University, Bailrigg, Lancaster LA1 4YW, by 15th April 1986. (91131)

University of Oxford

UNIVERSITY LECTURESHIP IN ZOOLOGY

Applications are invited for the above post from candidates with a first degree in Zoology or a related discipline. The successful candidate will be required to teach in Biology and in Human Zoology. The post is a full-time position and will be held for three years from 1st April 1986. Salary on the Lecturer scale £8,020 - £15,700. Applications (five copies) should be sent to the Department of Zoology, University of Oxford, South Parks Road, Oxford OX1 3PS, by 15th April 1986. (91132)

University of Oxford

UNIVERSITY LECTURESHIP IN ZOOLOGY

Applications are invited for the above post from candidates with a first degree in Zoology or a related discipline. The successful candidate will be required to teach in Biology and in Human Zoology. The post is a full-time position and will be held for three years from 1st April 1986. Salary on the Lecturer scale £8,020 - £15,700. Applications (five copies) should be sent to the Department of Zoology, University of Oxford, South Parks Road, Oxford OX1 3PS, by 15th April 1986. (91132)

UNIVERSITY OF GLASGOW DEPARTMENT OF ELECTRONICS AND ELECTRICAL ENGINEERING

As part of the UGC Shift Initiative THREE new posts are available for appointment of

LECTURERS REF. NO. 56977

Particular interests in CONTROL SYSTEMS, VLSI CIRCUIT DESIGN, CAD AND DEVICE MODELLING, PATTERN RECOGNITION AND SIGNAL ANALYSIS would be an advantage but applications are invited from persons having interests within the general Electronic Engineering area.

In addition a fourth LECTURESHIP is available through the Government's L.T. initiative in support of a major research group in guided wave and integrated optics. Experience of optoelectronics would be an advantage. Ref. No. 523747

Salary will be in the range £8,020-£15,700 on the Lecturer's scale with placement according to age, qualifications and experience.

Further particulars and details of the Departmental Research Programmes may be obtained from the Academic Registrar, University of Glasgow, Glasgow G12 8QQ, where applications (three copies), giving the names and addresses of three referees, should be lodged on or before 26th April 1986.

In reply please quote appropriate Ref. No. (905)

THE UNIVERSITY OF SHEFFIELD

Department of Applied and Computational Mathematics

LECTURESHIP

Applications are invited for a new post of Lecturer in the Department of Applied and Computational Mathematics. This post has been established using funds made available by the UGC as part of the Engineering and Technology Programme. The post is available from 1st August 1986.

Candidates should have teaching and research interests in one or more of the following areas:

Control Theory, Mathematical Programming, Optimization, Signal Processing, Candidates with expertise in other related areas of Applied Mathematics will also be considered.

Initial salary will be on the non-clerical scale £8,020-£15,700 according to age, experience and qualifications.

Informal enquiries should be addressed to Professor W.D. Collins, Department of Applied and Computational Mathematics, University of Sheffield S10 2TN (Tel: 0742 7655, 24 4357).

Further particulars may be obtained from the Personnel Department (Academic Staffing), The University of Sheffield S10 2TN to whom applications (six copies) including the names and addresses of three referees, should be returned by Friday, 18th April 1986. Please quote Ref. No. R0851.

University of Keele

SENIOR LECTURESHIP IN HEALTH SERVICES MANAGEMENT

Applications are invited for the above post, to be held from September 1986. The person appointed will be responsible for the development of a new health services management programme in the Department of Health Services Management. The post is a full-time position and will be held for three years from 1st September 1986. Salary on the Lecturer scale £8,020 - £15,700. Applications (five copies) should be sent to the Department of Health Services Management, Keele University, Keele, Staffordshire ST5 5BG, by 15th April 1986. (91133)

University of Keele

Applications are invited for the above post, to be held from September 1986. The person appointed will be responsible for the development of a new health services management programme in the Department of Health Services Management. The post is a full-time position and will be held for three years from 1st September 1986. Salary on the Lecturer scale £8,020 - £15,700. Applications (five copies) should be sent to the Department of Health Services Management, Keele University, Keele, Staffordshire ST5 5BG, by 15th April 1986. (91133)

Universities continued



THE UNIVERSITY OF PAPUA NEW GUINEA (Port Moresby)

VACANCIES LECTURER/SENIOR TUTOR/TUTOR - 0821005/86

Department of Language Studies

Applications are invited from suitably qualified candidates for the above post.

Applicants should possess a degree in English or English Education or a related discipline and have experience in TESOL methodology and in teaching English as a second language.

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COMPUTER SCIENCE Lecturer Senior Lecturer

Applications are invited from those with direct experience in Computer Science, for a Lectureship or Senior Lectureship.

The University offers degrees in Computer Science and intends to develop degree programmes in the field of Information Technology.

The person appointed will be expected to contribute to the design, teaching and administration of these new programmes, and to conduct research. The University will encourage the maintenance or development of links with industry.

The post is tenable from 1st October 1986, or as soon as possible thereafter. Salary and conditions according to qualifications and experience. USS.

Closing date for applications: 18th April 1986.

Further particulars from The Registrar, The University of Buckingham, Buckingham MK18 1EG.

The University of Buckingham

University of Oxford

UNIVERSITY LECTURESHIP IN ASSOCIATION WITH SOMERVILLE AND BALLIOL COLLEGES

Applications are invited for the above post from candidates with a first degree in English or a related discipline. The post is a full-time position and will be held for three years from 1st September 1986. Salary on the Lecturer scale £8,020 - £15,700. Applications (five copies) should be sent to the Department of English, University of Oxford, South Parks Road, Oxford OX1 3PS, by 15th April 1986. (91134)

Further particulars and details of the Departmental Research Programmes may be obtained from the Academic Registrar, University of Glasgow, Glasgow G12 8QQ, where applications (three copies), giving the names and addresses of three referees, should be lodged on or before 26th April 1986.

In reply please quote appropriate Ref. No. (905)

Further particulars and details of the Departmental Research Programmes may be obtained from the Academic Registrar, University of Glasgow, Glasgow G12 8QQ, where applications (three copies), giving the names and addresses of three referees, should be lodged on or before 26th April 1986.

In reply please quote appropriate Ref. No. (905)

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Polytechnics continued

PAISLEY COLLEGE

A Scottish Central Institution

DEPARTMENT OF MATHEMATICS & STATISTICS

Paisley College is a major degree awarding institution funded by the Scottish Education Department with 3,000 full-time students on vocationally orientated degree and honours degree courses.

Applications are invited for the following posts from well-qualified candidates who have a minimum of a good honours degree and research/consultancy experience.

a) Senior Lectureship in Computer-Enhanced Mathematics

b) Senior Lectureship in Mathematical Sciences

c) Lectureship in Statistics/Applied Probability

The successful applicants will contribute to the teaching and development of courses in mathematics and statistics to honours degree and post-experience levels. The Department's strong involvement in all other degree courses in the College includes teaching, joint research and consultancy and the supervision of research students.

Salary Scales: Senior Lecturer A - £13,710 to £17,280
Lecturer A - £ 9,321 to £14,718

Application forms and further particulars may be obtained from The Personnel Officer, Paisley College of Technology, High Street, Paisley PA1 2BE (Tel No 041-887 1241 ext 230).

KINGSTON POLYTECHNIC

Faculty of Education

LII/Senior Lecturer in Primary Teaching Studies (Art)

LII/Senior Lecturer in Primary Teaching Studies (Mathematics)

Salary £8,754 to £15,723 including London Allowance

The Faculty of Education wishes to recruit for September 1988:

(i) A lecturer with a specialist qualification in Art and recent experience in schools.

(ii) A lecturer with a specialist qualification in MATHEMATICS and recent experience in primary schools.

Both persons appointed will teach on the BEd Honours and PGCE courses, and will involve school-based work with students.

Further details and application forms from The Personnel Office, Kingston Polytechnic, Penryn Road Centre, Kingston upon Thames, Surrey KT1 1SE.

Closing date for applications: 18th April 1988. (74709)

LII in Primary Teaching Studies (Temporary appointment)

Salary £8,754 to £15,723 including London Allowance

The Faculty expects to be in a position to recruit a lecturer for a one-year appointment. The appointment would be particularly appropriate for a school leaver who has completed a school-based work experience scheme.

Further details and application forms from The Personnel Office, Kingston Polytechnic, Penryn Road Centre, Kingston upon Thames, Surrey KT1 1SE.

Closing date for applications: 18th April 1988. (74709)

Administration

The University of Lancaster

Registrar's Office

ADMINISTRATIVE ASSISTANT (GRADE 1A)

Applications are invited from graduates with a minimum of five years' experience of administrative work in higher education, or in a similar position in industry, commerce or other appropriate sector. Experience of, or training in, the following areas would be an advantage: internal and external communications, student recruitment, and general administrative duties.

Salary on the Administrative Grade 1A scale (£7,055 - £10,165).

Further particulars and application forms available from the Personnel Office, University of Lancaster, Bailrigg, Lancaster LA1 4YW.

Applications should be submitted by 17 April 1988. (71123)

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Colleges and Institutes of Higher Education

COLLEGE OF ST. MARK AND ST. JOHN
SENIOR POST IN MANAGEMENT AND DEVELOPMENT

BURSAR

This is a new post designed to meet the requirements of a growing and forward-looking College of Higher Education and the Foundation which supports it. The Foundation is a registered charity and Limited Liability company and is involved with the College in developing a new range of activities and enterprises including income development.

The holder will be a key member of the senior management team of the College and the Foundation. Responsibilities will extend beyond those normally associated with the traditional role of Bursar and will include:

The financial control of the College and the Foundation;

Maintenance and development of the College and Foundation assets;

Leadership of the non-academic staff;

The management, development and viability of College enterprises;

Clerk to the Council of Management and Company Secretary.

The College is a Church of England Foundation. It has a budget of approximately £4,000,000 derived from the Department of Education and Science, Local Education Authorities and a wide and growing range of activities and enterprises.

Salary by negotiation will be based on the present Burnham Scale Grade V (£17,000 - £19,000) and will reflect the responsibilities included in the post and the experience and qualifications of the successful applicant.

Further details from the Principal, College of St. Mark and St. John, Dartford Road, Plymouth PL6 8BH. (74763)

County of Avon
BATH COLLEGE OF HIGHER EDUCATION
(Incorporating Bath Academy of Art)Faculty of Art and Music
COURSE DIRECTOR BA (Hons) THREE DIMENSIONAL DESIGN: CERAMICS

Applications are invited from suitably qualified candidates for the above post who have a minimum of five years' experience in teaching and in the design of three-dimensional objects in ceramic materials.

Salary scale: PL 14 (H1) - £17,000 - £21,000

Further details from the Administrative Assistant, Bath College of Higher Education, Newton Park, Newton St. Loe, Bath BA2 9BN (Tel: 01225 3791).

Closing date for applications: 18th April 1988.

County of Avon is an equal opportunity employer. (74906)

Christ Church College
of Higher Education

Canterbury

For September 1988:

LECTURER 11/
SENIOR LECTURER

IN

MATHEMATICAL

EDUCATION

The person appointed will have the opportunity to engage in all aspects of work in the department but could specialise in any of the following areas:

Algebra, Analysis, Geometry, Mechanics, Probability, Statistics, Teaching, and other areas of Mathematics.

Applicants should have experience in teaching and in the design of three-dimensional objects in ceramic materials.

Salary scale: £14,000 - £21,000

Further details and application forms from The Personnel Office, Christ Church College, Oxford OX1 1PS.

Closing date for applications: 18th April 1988. (74709)

LECTURER 11/
SENIOR LECTURER

IN

MOVEMENT

STUDIES

To teach the philosophical aspects of human movement to BA (Hons) students, and to contribute to the following areas: athletics, practical areas: swimming, basketball, racket games.

Applicants should have experience of primary schools.

Salary scale: Lecturer 11/ Senior Lecturer £7,986 - £14,763 pa.

For further details write to: The Personnel Office, Christ Church College, Oxford OX1 1PS.

Applications should be submitted by 17 April 1988. (74709)

Further particulars and application forms available from the Personnel Office, University of Lancaster, Bailrigg, Lancaster LA1 4YW.

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Applications should be submitted by 17 April 1988. (71123)

Awards continued

NATURAL ENVIRONMENT
RESEARCH COUNCILSPECIAL TOPIC
PROGRAMMES

Council's Special Topic scheme provides funds to stimulate multidisciplinary research in priority areas in the sciences of the natural environment and in particular to promote collaboration between academic departments, NERC research institutes and other bodies.

NERC announce six Special Topics for 1986-89, tenable from October 1986. Applications will be invited for research grants, training awards and fellowships in the following areas:

1. ATMOSPHERIC CHEMISTRY - measurement of atmospheric constituents, chemical transfer across surface boundaries, climate change.

2. AGRICULTURE AND THE ENVIRONMENT - environmental consequences of changing agricultural practice (arable crops, grasslands and uplands). This programme will be co-funded by the Nature Conservancy Council.

3. ANIMAL ECOTOXICOLOGY - response of organisms, communities and processes to combinations of chemicals causing environmental damage.

4. BIOTECHNOLOGY - prediction of environmental consequences of the release of genetically manipulated organisms.

5. MARINE GENETICS - Visiting fellowships: application of genetic techniques to problems in physiology, biochemistry and ecology and marine organisms.

6. FLUID PROCESSES - physics, chemistry and mathematical aspects of fluid flow and interactions in porous media in relation to problems of diagenesis, metamorphism, fluid-rock interactions, fluid movement, heat transportation and formation of ore deposits.

The closing date for receipt of applications will be 12 May for 1 - 5 (outline proposals) and 1 June 1988 for 6 (full proposals).

UK Researchers interested in any of these Special Topics should request further information and application forms from:

Natural Environment Research Council, Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1EU Tel: 0793 40101

Further details and application forms available from the Personnel Office, University of Lancaster, Bailrigg, Lancaster LA1 4YW.

Applications should be submitted by 17 April 1988. (71123)

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Overseas

Nigerian Universities
ACADEMIC STAFF VACANCIES

Applications are invited from suitably qualified candidates to fill the following vacant positions in Nigerian Universities:

1. FACULTY OF MEDICINE/DENTISTRY/PHARMACY

Professors/Readers/Senior Lecturers/Lecturers - in all fields

2. FACULTY OF ENGINEERING

Professors/Readers/Senior Lecturers/Lecturers - in all fields

3. FACULTY OF SCIENCE

Professors/Readers/Senior Lecturers/Lecturers - in all fields

4. FACULTY OF LAW

Professors/Readers/Senior Lecturers/Lecturers - in all fields

5. FACULTY OF ENVIRONMENTAL SCIENCES

Professors/Readers/Senior Lecturers/Lecturers - in all fields

6. FACULTY OF VETERINARY MEDICINE

Professors/Readers/Senior Lecturers/Lecturers - in all fields

7. FACULTY OF SOCIAL SCIENCES

Professors/Readers/Senior Lecturers/Lecturers - in all fields